

# HAJJ STUDIES

## Volume 1

Edited by

ZIAUDDIN SARDAR and M.A. ZAKI BADAWI

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اللَّهُ نُورُ السَّمَوَاتِ وَالْأَرْضِ مِثْلُ نُورِهِ كَمِثْقَا ذَرَّةٍ فِي  
 مِصْبَاحٍ الْمِصْبَاحُ فِي زُجَاجَةٍ الزُّجَاجَةُ كَأَنَّهَا كَوْكَبٌ  
 دُرِّيٌّ يُوقَدُ مِنْ شَجَرَةٍ مُبَارَكَةٍ زَيْتُونَةٍ لَا شَرْقِيَّةٍ  
 وَلَا غَرْبِيَّةٍ يَكَادُ زَيْتُهَا يُضِيئُ وَلَوْ أَلَمْ تَمْسَسْهُ نَارٌ  
 نُورُ عَلَى نُورٍ يَهْدِي اللَّهُ لِنُورِهِ مَنْ يَشَاءُ وَيَضْرِبُ  
 اللَّهُ الْأَمْثَالَ لِلنَّاسِ وَاللَّهُ بِكُلِّ شَيْءٍ  
 عَلِيمٌ ٣٥

فِي بُيُوتٍ أَذِنَ اللَّهُ أَنْ تُرْفَعَ وَيُذْكَرَ فِيهَا اسْمُهُ  
 يُسَبِّحُ لَهُ فِيهَا بِالْغُدُوِّ وَالْآصَالِ ٣٦  
 رِجَالٌ لَا تُلْهِيهِمْ تِجَارَةٌ وَلَا بَيْعٌ عَنْ ذِكْرِ اللَّهِ  
 وَإِقَامِ الصَّلَاةِ وَإِيتَاءِ الزَّكَاةِ يَخَافُونَ يَوْمًا  
 تَتَقَلَّبُ فِيهِ الْقُلُوبُ وَالْأَبْصَارُ ٣٧  
 لِيَجْزِيَ اللَّهُ أَحْسَنَ مَا عَمِلُوا وَيَزِيدَهُم مِّنْ  
 فَضْلِهِ وَاللَّهُ يَرْزُقُ مَنْ يَشَاءُ بِغَيْرِ حِسَابٍ ٣٨

God is the Light of the heavens and the earth  
 The likeness of His Light is as a niche  
 Wherein is a lamp  
 (The lamp is a glass.  
 The glass as it were a glittering star)  
 Kindled from a Blessed Tree  
 An olive that is neither of the East nor of the West  
 Whose oil well nigh would shine, even if no fire touched it;  
 Light upon Light;  
 (God guides to His Light whom He will.  
 And God strikes similitude for men,  
 And God has knowledge of everything.)  
 In houses God has allowed to be raised up,  
 And His Name to be commemorated therein;  
 Therein glorifying Him, in the mornings and the evenings,  
 Are men whom neither commerce nor trafficking  
 Diverts from the remembrance of God  
 And to perform the prayer, and to pay the alms,  
 Fearing the day when hearts and eyes shall be turned about,  
 That God may recompense them for their fairest works  
 And give them increase of His bounty;  
 And God provides whomsoever He will, without reckoning.

The Qur'an: Surah An-Nur 24: 35-38.



## FOREWORD

In the name of Allah the Beneficent, the Merciful.  
Peace and the blessings of Allah be upon His messenger and his family and all his companions.

✓ Hajj is an obligation on every able Muslim once in a lifetime. It was instituted by the Qur'anic verse, 'And proclaim the Hajj to all mankind, they will come to you on foot and [mounted] on lean camels emerging from deep and distant mountain highways, so that they may witness the benefits [provided] for them and celebrate the name of Allah during the appointed days.' The benefits to which the verse refers are material and spiritual. The pilgrims derive material benefits through trade and social interactions and spiritual benefits from the improvement of their religious and worldly knowledge. However, the most significant benefit of the Hajj is the deep religious experience which profoundly affects the whole being of the pilgrims.

2 The Hajj is a practical application of all the pillars of Islam and some of its major ethical principles. It is a manifestation of the belief in the unity of Allah, for the pilgrims come out of 'devotion to Allah not associating any partner with Him'. The Hajj demonstrates Islam's abhorrence of all forms of social distinctions as all pilgrims wrap themselves in the simplest of white cloth without any regard for their position, wealth or power. It embodies certain characteristics of Zakat as the sacrifice is for the poor. The Qur'an says, 'Eat from it [the sacrifice] and feed the distressed poor.' It also contains some aspects of fasting since the pilgrims must refrain from sexual activities and avoid every degrading act. Finally, like *Salah* (prayer) the Hajj is a continuous immersion of oneself in the presence of Allah, excluding all other but Him from one's mind and heart. The secrets of Hajj are indeed varied and numerous. Most



of them are beyond our human ability to discover. Yet we experience them fully if we perform the ritual in the correct manner. As such, a strict adherence to the rules is essential for the realisation of the significance of Hajj and the reaping of its benefits.

Looking at various activities of the Hajj, it is obvious how important it is to prepare the pilgrims spiritually and physically for the testing task. This supreme act of worship must be performed in the best manner possible. The Hajj Research Centre is directed towards investigating conditions which might help the pilgrims derive the fullest spiritual and material benefits for themselves and for the whole Ummah. This volume is an example of its commendable efforts.

I pray to Allah to guide them in their endeavour.

Abdullah Naseef  
Vice Rector,  
King Abdul Aziz University.

In the name of Allah, the Beneficent, the Merciful.  
The Muslim world today shows many contradictory features which cause much confusion to observers both from within and without. Different forms of governments, different economic structures etc. all give a sense of extreme diversity, yet within this diversity is a kind of elusive unity.

This unity is really only witnessed during the Hajj — a common denominator which draws Muslims to Mecca from every segment of the globe. This is truly the only point in time and space where one can measure the state of the Muslim world simply by observing the pilgrims who represent a microcosm of the whole body of believers.

Time, however, has affected the very environment of Hajj. It has brought many changes to the city of Mecca, the surrounding holy areas and to the Ka'ba itself. Yet the functions and rituals of Hajj are unchanged for their character is immutable.

The main challenge of the Hajj today is how to fit the variables into the constants. That is, how to adopt the facilities and dynamics of changing quantities, qualities and space-time relations of the pilgrims into the physical space and ritual functions of sequences and timing of the Hajj. Furthermore, how to do this in a manner consistent with the fundamental principles and laws of Islam and in keeping with the best tradition of Islamic design and culture becomes the key to a Muslim solution to a Muslim problem.

After the 1394 (1975) pilgrimage, the Hajj Research Centre was formed to meet this challenge. The formation of the Centre was timely, for the need for objective, systematic scientific research on the environment of Hajj was



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long overdue. The location of the Centre in a major, growing university close to Mecca was a logical step. Moreover, this location gave the Centre freedom from constraints of day-to-day problem-solving, planning implementation and diverse activities such as those which bind the function of various ministries involved in projects related to Hajj; and an overview necessary for scientific research into the entire situation. The academic nature of the Centre lifts it above the commercial interests and limitations of foreign consultants.

The strength of the Centre is its interdisciplinary research team which has a strong background in urban planning, architecture, transportation, geographical studies, information science, audio-visual techniques and the Shari'a. Here there is depth of experience in different aspects of Hajj and an orientation towards the use of contemporary systems methodologies including mathematical modelling. Overriding this experience and orientation is the belief that the Islamic methodology demands interdisciplinary and team approaches to problem-solving without, however, ruling out the function and value of qualified individual research.

Thus as the growth of King Abdul Aziz University as a major intellectual and research centre in the Middle East attracts scholars of ever higher standards, we hope to engage minds interested in the unique problems of Hajj, and hearts sincere in the desire to serve Islam.

This first volume of Hajj Studies consists of some of the papers presented at our First Hajj Seminar held at the King Abdul Aziz University immediately after the 1396 (1976) Hajj. Some 25 Muslim scholars, architects and planners participated in the seminar. The proceedings of this seminar are, however, not just for the scholars and architects. This book is written for all Muslims who are concerned about

the changes and developments in the environment of Hajj.

Sami Mohsin Angawi,  
Director,  
Hajj Research Centre,  
King Abdul Aziz University.



The Hajj is an ancient rite which was well established in Arabia long before Islam. It was one of the few traditions of the monotheistic religion of Abraham that survived the onslaught of pagan practices. The holy Qur'an relates the story of how 'the Father of the prophets', Abraham, built the Ka'ba with the help of his son Ishmael and in obedience to Allah proclaimed the Hajj to all mankind. There are reports which take the Hajj further back in history and associate it with man's first steps on this planet. The barren hills and inhospitable valleys of Arafat, Muzdalifah, Muna and Mecca have undoubtedly been held in great awe and reverence from the depths of antiquity.

At the time of the Prophet Muhammad — peace be upon Him — The Hajj has been so completely assimilated into Arabian paganism that it lost its original monotheistic message. Idols punctuated not only significant spots in the holy area but were in residence in the Ka'ba itself — the very symbol of monotheistic belief. Furthermore, pagan customs introduced certain undignified and discriminatory practices in the Hajj. The tribe of Quraish who inhabited Mecca and guarded the Ka'ba together with certain of their allies were raised into the position of a religious aristocracy. They were allowed to perform the rite of *tawaf* fully attired in their normal clothing and were excluded from the *wquf* (sojourn) on the Mount of Arafat on the grounds that they should not leave the Sanctuary of Mecca which does not include the Mount of Arafat. Others, however, had to shed their clothes, which were regarded by the pagans as unclean, and either to perform the *tawaf* completely naked or to obtain 'ritually clean cloth' from a Quraishi. The strict pagan code also prohibited those wishing to perform the rite to consume any



food other than Meccan food. The importation of food for the consumption of Hajjis was forbidden. To avoid exploitation the pagan Quraishites undertook to provide hospitality for the Hajjis for the duration of the rite.

Islam took Hajj back to its original form. The idols were completely abolished and the holy places were purified for worship of the one God, Allah. The various aspects of Hajj consequently regained their significance. The throwing of the pebbles (*j'amarat*), which is part of the ritual, ceased to be an adoration of an idol and became once more a symbol of resistance to temptation and full surrender to Allah. The *tawaf*, which was in paganism a homage to the numerous idols and the Black Stone, became in Islam an act of glorification of the one God of Abraham.

The tribe of Quraish was brought down to the level of others through the egalitarian principle of Islam. 'Those most honoured in the eyes of Allah are the most pious', says the Holy Qur'an. Distinction on the basis of family tribe, race or colour was declared abhorrent to the religion of Muhammad. Quraishites were made to dress like all others in two lengths of white unstitched material so that all men come to the house of Allah devoid of the sin of pride. They stand humbly in front of their Creator. They stand with heads uncovered, *sans* splendour, *sans* worldly magnificence. Only the women were allowed to wear ordinary clothes provided that they covered all their bodies except their hands and faces. The indignities that womanhood suffered before Islam in the Hajj and outside it were thus redressed by treating them as a privileged group.

Quraish were also made to join others in Arafat. 'Then move on [towards Muzdalifah] from the spot where other people move on from', says the holy Qur'an, declaring the Quraishite claim to distinction null and void.

Perhaps because the Hajj was so embedded in the pagan practices of the Arabs it was the last of the major obligations (*Arkans*, popularly known as pillars) to be instituted. According to the most reliable sources it was made

obligatory only in the 9th year of the Hijra after the conquest of Mecca and the destruction of all the pagan idols and shrines in the holy area. To complete the break with paganism the Qur'an declared that 'the idolators are but spiritually unclean. They shall not come near the sacred place of worship after this year.' (The ninth year after the Hijra.) Thus the holy sanctuary became purified of all forms of paganism and secured from being sullied by the presence of pagans.

Despite all these safeguards the Prophet was well aware of the strength of pagan attitude on the part of the new converts. He wished to demolish the Ka'ba as it existed in his day because he knew that it was not built on the foundations of Abraham. He told Aisha, 'Had your people not been so close to their pagan past I would have demolished the Ka'ba and rebuilt it on the foundations of Abraham.'

Every aspect of the Hajj is invested with so much demonstration of fervent commitment to the one God Allah as to emphasise the deep meaning of the ritual and the total surrender of the worshipper to Him, Most High. From the moment he dons his *ihram*, the pilgrim declares, 'O Lord, here am I in response to your call.' There is no partner to Allah. In facing the Ka'ba, the Black Stone and every other sacred landmark he calls 'Allah Akbar' (Allah is Great) and there is no God but Allah.

The Haram is inviolate. Any person taking refuge in it may not be disturbed even if he has committed the most hideous crime. He is, however, not to be fed or sheltered so that he would be forced to leave the Haram and face the consequences of his crime. The animals and plants of the Haram are protected, they are to exist in peace and harmony with their environment. Man, the most destructive of all Allah's creatures, is thus made to restrain his propensity to hurt animals and fell trees.

The pilgrims are particularly instructed to refrain from lewdness, abuse, or hostile argument. The Muslim should not commit any of these at any time but they are more sinful



during the Hajj. He must refrain from any sexual activity, or from contracting a marriage. He must not use perfume or cut his hair or clip his nails. The male must keep his head uncovered and the female must keep her face veiled. The whole being of the pilgrim must be completely devoted to Allah without attention to appearance. His instincts must be restrained by his awe of the Lord that his aggression towards man, animal or plant must be blunted or completely annihilated, and the sex urge fully sublimated. He comes to his God dishevelled and covered with dust to seek His mercy and crave His forgiveness.

The experience is, for so many, a rebirth. Indeed the prophet — peace be upon him — stated: 'Those who perform the Hajj in the right manner and with full spiritual and emotional involvement shall come down from Arafat pure "as the day his mother gave birth to him".' This momentous experience should transform the ordinary man into a new one, a true Muslim fully devoted to the faith and completely submerging his will to the will of his Creator. It is hard to describe such an experience, it defies language. Its attraction is so compelling that the dream of every Muslim whatever his place of birth or place in society is to come to Mecca and to receive the grace of Allah.

Hajj takes place only once a year in the lunar month of Zull Hajjah, the twelfth month of the Muslim calendar. It falls on the 9, 10, 11 and 12 of that month and follows a strict procedure. The Haram, however, is ready to receive the worshippers outside these days. He can come for Umra, the lesser Hajj, at any time during the year; and every able Muslim must perform the Hajj and the Umra once in his lifetime. Many Muslims flock to the Holy City almost daily. By light of day or in the dark of night you will see worshippers in thin white cloth converging on the Ka'ba or going round it or walking the distance between the two hills of Sufa and Marwah. The sound of their pleading voices and the patter of their hurrying feet fills the heart with awe. No place on earth inspires such a profound experience.

The Ka'ba has always been held in great esteem. When Abdullah b. Ama b. Alas noticed a house which appeared to tower over a site of Ka'ba he deplored the action of the builder. He regarded the incident as a sign of doom for the world. A descendant of Al-Abbas, a few generations later, instructed his mason to build his house below the height of the Ka'ba. Such was their regard for the House of Allah and their demonstration of piety and humility.

Then the Ka'ba had to symbolise its spiritual pre-eminence with physical pre-eminence. The sacred House of Allah must dominate the profane abodes of men. Mecca was also seen as the property of all Muslims, the dweller and the visitor. For this reason some authorities forbid the charging of rents for accommodation in Mecca. It must remain a holy and not a commercial city.

**RITUALS** The pilgrimage is a complex ritual and to give a simple portrayal of it let us follow a hypothetical Hajji through his performance. He begins by wearing the right cloth for *ihram*, having performed a ritual bath. He must be in the right cloth (*Ihru*) before passing one of the other prescribed points. These points were specified by the Prophet for travellers from various directions. Thus those coming from the direction of Medina have their point of *ihram* or *miqat* in a place called Dhu Al-Hulufa while for those coming from the direction of Syria the *miqat* is Al-Julfa. For the traveller from the direction of Najd the *miqat* is quran Al-Mannzil. The *miqat* for those coming from the direction of the Yemen is Yalamlum. Having started his *ihram*, the pilgrim should proceed to Mecca, calling on the way, 'O Lord here am I in answer to your call. Here I come, you who is without any partner. Praise and grace are yours alone and the dominium. You have no partner.' Once he arrives in Mecca he performs the *Tawaf Al-Qudum*, Circumambulation of Arrival. He goes around the Ka'ba seven times anti-clockwise with his right shoulder bared to demonstrate his humility. His starting point is the Black Stone which he should touch, if possible, otherwise he should point out towards it every time he passes



it. During the *tawaf* he should pray to Allah with sincerity and fervour. After the seventh round the pilgrim should perform two *raka't* of prayer behind *Magaam Ibrahim* which is the stone on which Abraham stood while building the Ka'ba. He should then drink from the water of Zamzam Well then proceed to the Hill of Sufa and start the walk between this Hill and the Hill of Al-Marwah. He covers this distance seven times starting at Al-Sufa and ending at Al-Marwah. Then on the 8th of Zull Hajjah he should go to Muna on his way to Arafat. He may sleep on the night in Muna and then on the ninth he proceeds to Arafat. At the mosque of Al-Namira, just before the Mount Arafat, he should pray the Zuhur and Asr prayers together at the time of Zuhur.

Why all these complicated rites? The simple and correct answer is because Allah instituted them. But man will seek a meaning even when it is beyond him to discover. Al-Ghazzali says in this regard,

Allah has favoured this Ummah with the Hajj. He honoured the Ancient House by calling it His own and He appointed it as destination for His servants and made the area around a sanctuary to glorify it. He made Arafat like a pipe pouring into this courtyard. To emphasise the sacredness of the place he made all its animals protected animals. Visitors from long distances arrive dishevelled, covered with dust, humble to their Lord, sublimating to Him and submitting to his power. All this while recognising that He could not be contained in a house or surrounded by a town.

In this way their complete servitude to Allah is manifested and their obedience to Islam is perfected. For this reason he commanded them to perform acts which are difficult to get accustomed to and impossible to appreciate the hidden meaning of, such as the throwing of pebbles and the walk between Al-Sufa and Al-Marwah, which are demanded to be repeated again and again. In performing such actions the full

submission and servitude to Allah are made manifest.

Of all the practical manifestations of Islam the Hajj has always captured the imagination of Muslims everywhere. Many will save all their lives to accumulate the required minimum to embark on the great journey to the Holy Places and some might even dispose of their capital and the source of their livelihood to find the necessary funds. Some still cover long distances on foot over a period of years thus demonstrating an unparalleled devotion.

The physical changes brought about by modern technology have dramatically complicated the Hajj in two ways. Firstly, travel has become easier, faster and at the reach of a larger portion of the ever-growing world population. Naturally, Muslims from every corner of the earth converged on the holy places, thus straining the available facilities and, more importantly, causing intolerable congestion in Mecca and its environs. Secondly, the use of the new modes of transportation, the aeroplane and more specially the motor car, made the congestion even more unmanageable in addition to the radical environmental devastation they brought about in the sacred areas in the form of airports and more in the form of roads for motor cars.

The Hajj Research Centre convened a conference of specialists to ponder the issue and initiate work for solutions. The problem, as Sami Angawi states, is 'How to fit the variables into the constants, that is to say, how to adapt the facilities and dynamics of changing quantities, qualities and space-time relations of the pilgrims to the physical space and ritual functions, sequences and timings of the Hajj.' Likewise, how to do this in a manner consistent with the fundamental principles of Islam. The logical membership of the seminar included architects, sociologists, historians, town planners, road designers, modular systems specialists, information scientists and scholars of Islam. The papers that follow are contributed by scholars of different disciplines. They are united by their subject matter rather than by the method of approach. They present the interested scholar and decision-



maker alike with a study of some of the various aspects of Hajj. One paper, that of Ismael Gibson on 'Simulation Models', is a first attempt to apply a new technique to the problems of Hajj. Adil Bushnak thoroughly examines the present transport system and makes a number of pertinent suggestions. He notes that the Hajj organisation and services in Muslim countries are mostly traditional. His suggested improvements take into consideration the need 'to provide safe and efficient transportation for pilgrims such that the religious, social, economical and political functions of the Hajj are fulfilled'. He goes on to suggest that 'some areas of research related to Hajj could make a valuable contribution to the Islamisation process, particularly in the field of urban technology. There is a need to develop a comprehensive set of objectives and criteria applicable to an Islamic setting. The real crisis in planning and construction in all Muslim countries is that it is imitative. It follows blindly the Western models despite its tangible disastrous consequences'. To turn our holiest city into a carbon copy of Western metropolises is, as Mohammed Jamil Brownson states, 'the first step towards self-destruction'. He notes rightly that 'in the ritual areas, rapid transit is exactly the opposite to the real mass movement patterns and would create greater congestion at action points where rituals must be performed. What is needed is a system that allows an even flow of pilgrims through the various stages'. The Western model calls for higher buildings, faster traffic, and wider road systems necessitating wide destruction of the city and mutilation of the holy area. If the Muslims choose to follow this path 'without sensitive discrimination and cultural filtration', as Ayyub Malik, whose paper was written as a reaction to the seminar, states, 'their cities may acquire skyscrapers, motorways and supermarkets and with it, the same, perhaps more, of the human consequences of its Western counterparts. In this transformation, all the long history, social structure and cultural symbols will be lost'. The violence to the environment of Hajj is detested by all regardless of their background

or discipline. Thus there is a common ideology that underlines the contribution of these scholars.

Awang Had Salleh's contribution on the Malaysian experience of Hajj management points out that far from being confined to Mecca or Saudi Arabia, problems of Hajj span the whole Muslim world. The *Tabang Hajji*, or the Hajj fund, was the brain-child of Professor Ungku Aziz of Malaysia. I had the honour of witnessing its birth and was delighted to learn from Dr Awang how it matured into a most successful economic venture. The brilliance of this scheme rests on its clever utilisation of religious motive for the economic advancement of Muslims. It thus fulfils one of the many purposes of Hajj. It helps to improve the lot of Muslims or at least to reduce their anxiety about the financial aspects of Hajj. Such anxiety could affect adversely the act of worship. The conditions of living in Mecca could contribute adversely or favourably to the experience of Hajjis, as Ghazy Makky's investigation into 'Pilgrim accommodation in Mecca' notes. 'These problems', he states, 'necessitate continued research and planning. Research, for example, to further increase the quality and quantity of pilgrims' accommodation.' He further observes that 'pilgrims cope with difficulties in a way which makes them seem minor or non-existent, given the transcendental experience which is the Hajj. 'There is little doubt that this is true. The Muslim who embarks on his long march from West Africa to the Holy Land with no provision but his faith cannot possibly be described as craving for comfort. It might, however, be argued that such cases do not express accepting discomfort as a choice but put up with it as a fate. These long-distance marchers are among the poor who sustain themselves on their arduous journey by selling their labour. They are also those who cut loose from their roots, caring little if they are absent for seven years or for ever. There are, however, many who feel that a certain degree of suffering enhances their spiritual experience. Such a statement needs to be qualified and Ziauddin Sardar sets out to examine the two dimensions of Hajj, the spiritual and the



physical. He invites us to consider the Hajj as a dynamic system. He then traces the movement of the individual Hajji throughout his performance pointing out the deep spiritual significance of action and every move. A Muslim performs his religious obligations as an act of surrender to Allah. He derives his inner comfort from his sense of fulfilling the command of his Creator. Seldom if ever does the ordinary Muslim indulge in the contrived effort of those who try to find the permanent meaning behind the transient act of worship. He is satisfied if he worships in accordance with law. His attitude to Hajj, is, however, different. He knows and feels that its every part is a symbol of much older and more significant events. The Hajji almost has the virtue of constancy. The burned hills and the bleak valley suffer no growing plants to alter the scene or eat into the heart of the soil. Being barren means being permanently unalterable. Only when the powerful bulldozers, the noisy and terrifying dynamites were introduced did the face of the Sacred Valley radically change. The old space which helped to create the illusion of times past is no more and the Hajji has to strain his imagination to enact the old drama. But this is another story. The environment of the Hajj is the environment of the Qur'an, of the Prophet, of all prophets. Every action symbolises an event in the life of the father of the Prophets, Abraham, during his short stay in the barren valley and his first-born son Ishmael. Thus the Hajji feels himself a part of this blessed family sharing in its tribulations and celebrating its delivery from danger. The symbolism of throwing of the pebbles on the walks (*Sa'y*) between Al-Sufa and Al-Marwah and the sacrifice once made clear to him, his whole being becomes totally involved in the Hajj. He feels outside his time and space, back in the era of Abraham and the sacred family. Physical discomforts, as Sardar says, will be humbly endured by the pilgrims who regard physical exhaustion a way towards spiritual enlightenment. There is however a critical point beyond which suffering could become detrimental to the whole experience. Sardar illu-

strates the point by means of an inverted cone model in which the spiritual experience is shown as growing in depth and breadth the less the Hajji is preoccupied with his material needs.

On the basis of this model he distinguishes between three types of Hajj performance: (1) The ideal Hajj, in which the physical experience is insignificant and (2) the non-ideal Hajj, in which the Hajji will spend most of his time totally preoccupied with the physical aspects of the pilgrimage and, finally, (3) is obtained where the Hajji suffers no physical discomfort and experiences no spiritual elevation. It is the Hajj of those who come in their convertibles, traversing the holy area as if on a picnic:

There is little that can be done to improve the lot of those whose comfortable style of life may close their hearts to the richness of Hajj, but those whose misfortune arises from an unhelpful environment are of great concern for the Hajj Research Centre. The Centre investigates the causes of the emergence of this type of Hajj and attempts to find remedies. It endeavours to help make every Hajj an ideal Hajj.

These papers have attempted in their different ways to formulate questions and sometimes to suggest answers. There is no claim that they have asked all the possible or even the important questions. Nor is there any claim that they have exhausted all the possible answers. They present the first genuine attempt to apply a scientific approach to the problems arising from the Hajj. There will be, it is hoped, numerous other volumes covering areas not covered in this volume and employing different techniques. We hope in future to publish detailed 'market research' work on all aspects of services that the Hajj demands. We also hope to produce information on the organisation of the Hajj throughout the world. We hope also to investigate the social and economic influence of Hajj with reference to certain study groups or communities on the basis of which some tentative generalisations can be made. Data on the statistics of Hajj will also be published by the Centre. Development in the



Holy areas will also be photographed and described.

We hope the series of volumes and publications will eventually cover the whole area of study and will give scope for scholars of all relevant disciplines to offer their contributions.

## 2 THE SPIRITUAL AND PHYSICAL DIMENSIONS OF HAJJ: A SYSTEMS OVER-VIEW

Ziauddin Sardar

In the name of the One God, All-Merciful, All-Loving, The First and the Last, the Deliverer from error, the Possessor of all knowledge, Praise be to Allah; and peace be on Muhammad, the last of the Messengers.

Umar bin al-Khattab, the second Caliph of Islam, relates in a well known hadith that one day a man with very white clothing and very black hair came up to the Prophet. No one could recognise this man. No sign of fatigue could be detected on him. Sitting down beside the Prophet, leaning his knees against his, and placing his hands on his thighs, the man said: 'Tell me, Muhammad, about Islam'. The Prophet replied: 'Islam means that you testify that there is no god but God and that Muhammad is God's messenger, that you should observe the prayer, pay the *zakat*, fast during Ramadan, and make the pilgrimage to the House if you have the means to go.'

'The pilgrimage to the House', the Hajj, is the fifth and final pillar of Islam. It is a declaration of Belief, a process of renovation, and an expression of inspiration, motivation and devotion. It is an acknowledgement of the command of God. 'What is Thy Command?' asks the pilgrim. 'I am here O God, for Hajj,' and he repeats:

Here I am O Lord, in Answer to your call!  
 What is thy call, here I am!  
 What is thy call, here I am!  
 What is thy call, here I am!  
 Thou art without companion!  
 What is your call, here I am!  
 Praise and blessings are thine, and Dominion!



Thou art without Companion!

The Hajj is a living, dynamic, operational form of the command of God: 'Perform the Hajj and the Umra for Allah.' (The Qur'an: 2. 196.) As such the Hajj is performed not because the pilgrims seek inspiration, but because they are inspired. The Hajj, as Ahmad Kamal has pointed out, is an expression, and not a search for belief.

As an expression of belief the Hajj is the *apex* of spiritual experience of Muslims, a journey through the enlightened history of Islam.

Besides the spiritual experience, there is another dimension of Hajj: the physical. Hajj literally means an *effort*. Conventionally, Hajj is translated as pilgrimage although, like most Qur'anic words, it is far richer and signifies much, much more. The Hajj is an effort, the great Effort for assimilating one's self with the will of God. It is this assimilation that generates the spiritual dimension of Hajj; and it is the effort, physical as well as mental, that brings assimilation.

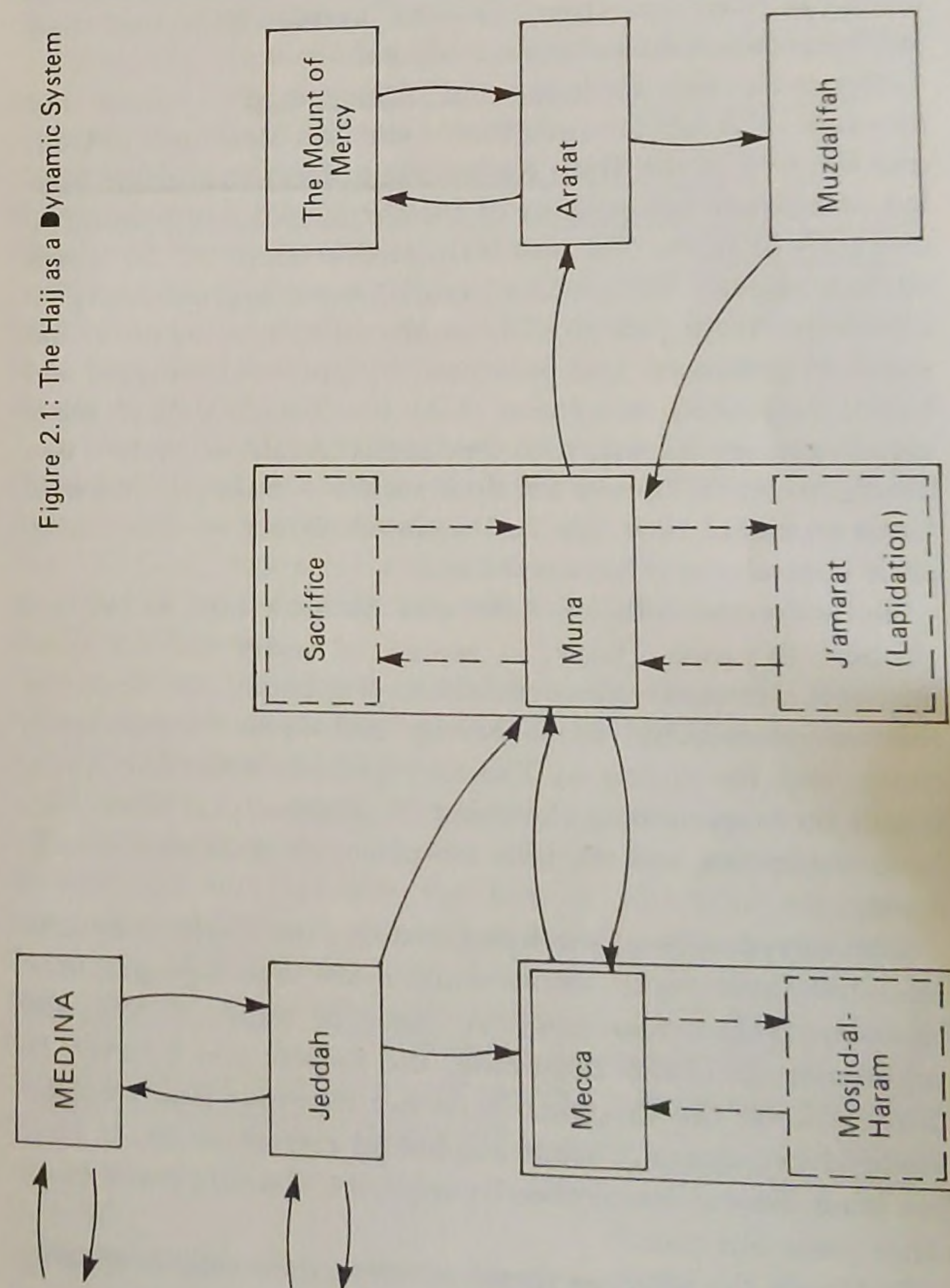
### *The Hajj as a Dynamic System*

To fully appreciate the physical and the spiritual dimensions of Hajj, let us consider the Hajj as a dynamic system. Figure 2.1 gives a systems representation of the movements and rites of Hajj.

The point of entry into the *Hijaz*, the Holy Areas, for all pilgrims coming by air and sea, and most of the pilgrims coming by land, is Jeddah. Here the pilgrims begin active preparations for the assimilation with the Will of God.

The preparation towards this assimilation begins with the *ihram*: the pilgrims abandon their worldly dress and with it their material desires and develop a state of *ihram* — physically, the *ihram* consists of two unsewn sheets of cloth, a loin cloth and a shoulder cover with which the pilgrims cover themselves; spiritually, the *ihram* consists of many sacred prohibitions: there cannot be any acts of aggression, personal adornments are not allowed and sexual desires and impulses

Figure 2.1: The Hajj as a Dynamic System





must be sublimated. Once in a state of *ihram* the pilgrims move towards Mecca.

The Holy City of Mecca receives the bulk of the pilgrims on the sixth, seventh and eighth of the Muslim month of Zull Hajja. Some of the pilgrims arrive earlier (in some cases as much as two to three months before Hajj) and find accommodation in and around Mecca.

Mecca is the birthplace of Muhammad — peace and blessings of Allah be upon him — the Last Messenger of God, and the site of the Holy Ka'ba, the prime focus of the Muslim world and the symbol of the permanent and immutable character of Islam. The city is situated in about 21° 30' north latitude and 40° 20' east longitude, and is approximately 70 kilometres from Jeddah. The sandy valley running north and south is embraced and protected by powerfully rugged and harsh, sun-baked mountains. Like the 'Barren Valley', these mountains are sacred, too. One spells 'Allah' in Arabic; two others are well known for their names — Sufa and Marwah. Until recently, time has had as much effect on these magnetic contours as it has on the sea.

Between the hills of Sufa and Marwah ran, hither and thither, Syyadna Hagar, in search of water for her suckling son, Ishmael: the desolation, the panic, the heat, the thirst-stricken baby, drove her up and down the hills seven times; and the spring of Zamzam gushed forth. The spring is still there quenching the thirst of pilgrims year after year. Both the spring and the hills are places of emotional attachment.

The sacred nature, the living history, the spiritual dynamics — all these make Mecca much more than a geographical location. It is a Sanctuary. A frame of mind. A profound experience. It is the Beginning, the Present and Forever. In the words of the Prophet: 'it is not man but God who has made Mecca sacred.' 'What a splendid city thou art. If I had not been driven out of thee by my tribe, I would dwell in no other place but thee.'

In Mecca the pilgrims spend much of their time in soaking

up the history and the spiritual fervour of the city. Much of their time is spent in the *Masjid al-Haram*, the Sacred Mosque. The holy Ka'ba is situated in the *Masjid al-Haram*. On entering the Mosque the pilgrims circumambulate the Ka'ba seven times, a gesture to show their readiness to obey the command of Allah.

After the circumambulation of the Ka'ba, the pilgrims perform the *Sa'y*: the act of covering seven times the ground between the hills of Sufa and Marwah.

It is traditional for the pilgrims to spend the night between the eighth and ninth Dhu Al-Hijjah at Muna. Some pilgrims go directly to Muna; others go via Mecca.

The ninth of Dhu Al-Hijjah is the Day of Arafat. The pilgrims leave for Arafat and reach the valley before midday. It is here that the supreme hours of Hajj are spent. In fact, *Arafat is the Hajj*.

It was at Arafat that Prophet Adam and Syyadna Hawa (Eve) found each other after their fall from Paradise. In gratitude to Allah, the descendants of Adam and Eve turn to Him: 'O God forgive me and aid me in my repentance.' It is an effort to forgive themselves and assimilate themselves with the Divine Presence.

Even before the pilgrim enters the valley his soul is flowing with the spiritual *rahmah* (bounty) of his Creator. Is not Allah the Greatest of Givers?

When the sun passes the meridian, the ritual of *wquf* (standing) begins. Already the pilgrim has experienced a brotherhood and humility the like of which he has never known before. Here in this valley, the Magnificent, the Beneficent, the Merciful, will send down his forgiveness on those whom He will — and they will feel His presence. Brotherhood has reached its peak, but the overriding experience is personal. It is I, and my Lord; and the noblest hours of my life. I experience Him as the veils which hide him from me are removed: 'I was a hidden treasure and I wished to be known.'

Immediately after sunset, on the ninth of Zull Hajja



begins the *nafrāh*: the mass exodus of pilgrims from the sacred mountain, out of the valley of Arafat, towards Muzdalifah. Muzdalifah is an open plain sheltered by parched hills with sparse growth of thorn bushes. The pilgrims spend a night under the open sky of the roofless Mosque, the Sacred Grove, Al Mush'ar al-Haram.

On the morning of the tenth, all depart from Muzdalifah and head back towards Mecca. Here the pilgrims spend three days during which they perform two major rites.

The tenth of Dhu Al-Hijjah is the day of the Feast of the Sacrifice, 'Id al-Ahha or 'Id al-Qurban. The two rites to be performed on this day are the stoning of 'Satan' and the sacrifice of an animal. Both of these rites are related to the story of Prophet Abraham — peace be upon Him. When Prophet Abraham declared his love for God, the story goes, God demanded as a proof the immolation of his son. To further compound his trials, Satan made three attempts to dissuade Prophet Abraham from his resolution to go ahead with the sacrifice of his son. On each occasion Satan was stoned. The setting of this story is the stony valley of Muna. The three 'spots' where Satan was stoned are marked with masonry monuments. On the tenth of Dhu Al-Hijjah the pilgrims stone only *Jamarat al-Aqabah*. On each of the next two days, all three 'Satans' are stoned. The entire act is a symbolic gesture to cast out 'the Satan within' and to fight undesirable temptations. After performing the sacrifice and stoning of the *Jamarat al-Aqabah*, the pilgrims can close their *ihram* with the cutting of the hair.

The final rite of the Hajj requires the return of the pilgrims to Mecca to perform the *tawaf Ifadah*. When the Hajj is complete, most pilgrims will visit the holy city of Medina. Others may have already visited Medina and will proceed to Jeddah. Most of the pilgrims who visit Medina after Hajj will also eventually return to Jeddah. From Jeddah the Hajjis will head towards their final destination.

From this brief systems analysis of the movements and rites of Hajj, it can be seen that the pathway to spiritual

enrichment, the journey towards the assimilation with the will of God, leads through the physical process of Hajj: all rites of Hajj require a certain amount of physical exhaustion. The pilgrims suffer humbly the physical discomforts of the Sacred Journey for they know that physical exertion is a way towards spiritual enlightenment. However, if the physical exhaustion is increased beyond its natural limits, say, for example, by introducing into the physical process of Hajj noise which does not belong to the Hajj environment, the pilgrims become overburdened with physical exhaustion. The Hajj now becomes much more of a physical experience than a spiritual one. If the physical dimension is further increased, the spiritual experience of Hajj diminishes proportionately. There is a hypothetical point at which the spiritual aspect of Hajj is altogether removed by the overpowering physical experience of Hajj. When this hypothetical point is reached the Hajj is reduced to a set of mechanical actions. If this happens, and it is happening to some degree, it will be a tragedy of unparalleled magnitude.

#### *The Inverted-Cone Model*

It will help our understanding of the critical limits of the physical dimensions of Hajj if we imagine the entire process of Hajj as an inverted cone. Figure 2.2 illustrates the model: the upper lip of the cone, extending towards infinity, represents the spiritual dimension of Hajj. The base of the cone (in fact, the inverted apex) signifies the physical dimension of Hajj. In an ideal Hajj, the physical experience of the pilgrim will be insignificant compared to his spiritual experience. In a non-ideal Hajj, the pilgrim spends most of his time fighting the physical aspects of Hajj which have taken a formidable form. He has little time left for reflection, prayer and meditation. His experience is represented by the dotted cone in Figure 2.2; a large physical component, the apex of the dotted cone.

There is even a third type of Hajj experience, or rather it is a non-experience Hajj, represented by the Base Line in the



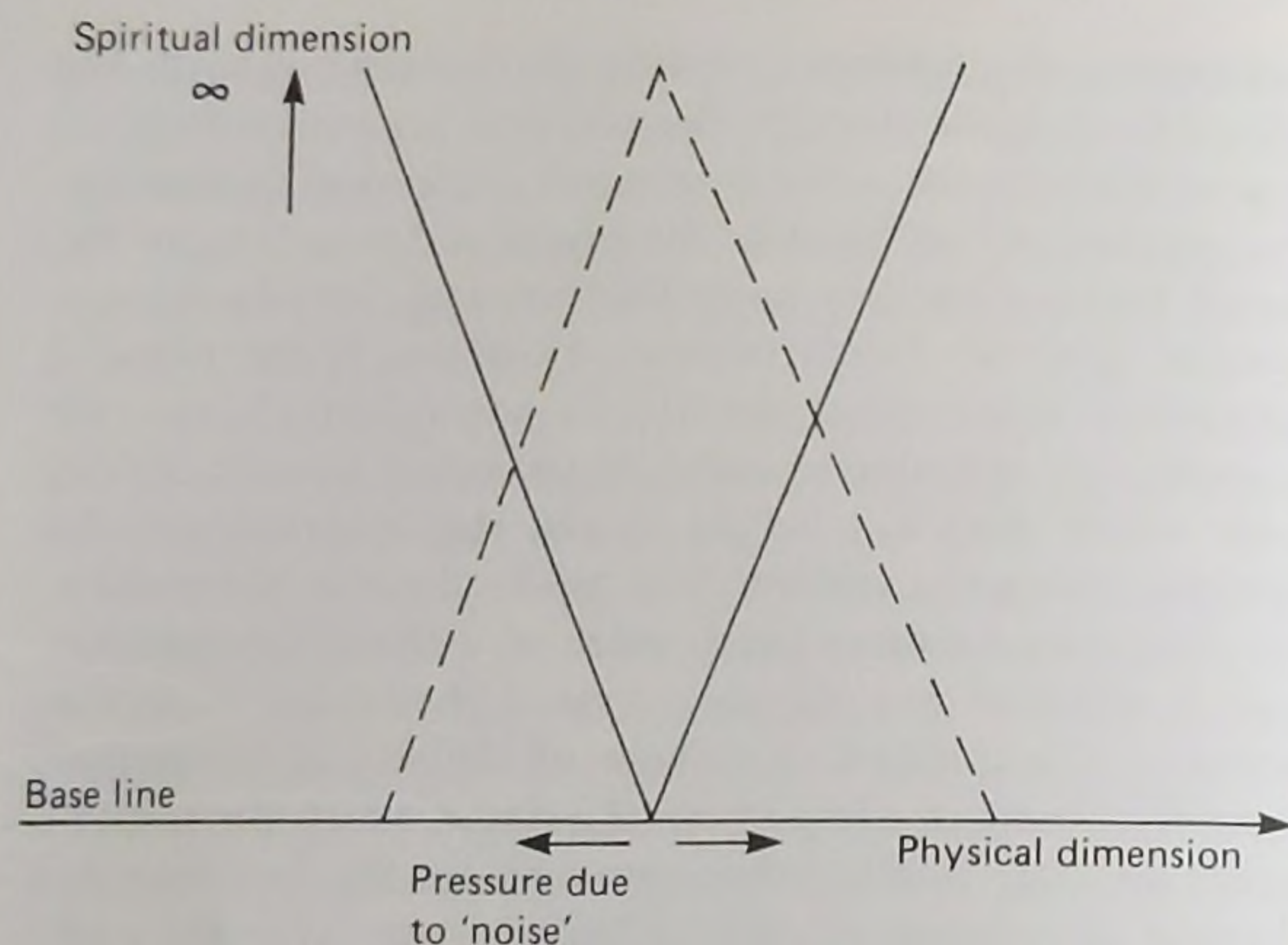


Figure 2.2: The Inverted-Cone Model

model of Figure 2.2. Those who come with their convertibles, bringing everything with them but the kitchen sink, as if on a picnic, experience nothing: neither the physical discomfort nor the spiritual enrichment.

At this stage arise three operational questions: (1) how does the second type of Hajj come about; (2) what can be done to transform the second type of Hajj into an ideal Hajj; and (3) how can the ideal Hajj be preserved and safeguarded from transforming into the non-ideal Hajj?

Much of the work of the Hajj Research Centre revolves around these three questions. The work carried out so far has thrown some light on the first question. The second and the third questions have yet to be articulated in depth, but some strong indicators have already emerged to pave the way for future work.

So, how does the second type of non-ideal Hajj come about? This situation arises due to pressure on the base of the inverted cone. This pressure manifests itself in the form of 'noise'. Noise is anything that is alien to the environment of

Hajj and that interferes with the spiritual development of pilgrims. Three examples will suffice to bring the concept of noise into focus.

The dominant theme during Hajj, as noted, is the assimilation of the pilgrim with the will of God. This assimilation results, in part, from prayer, inner reflection and meditation. The major requirement for prayer and reflection is peace: peace within and peace without, peace with Allah and peace with one's soul, peace with one another and peace with the environment, peace with birds, animals and even with insects. This is why *all* form of aggression is forbidden during Hajj. The state of *ihram* is a state of peace. However, it is difficult, nay quite impossible, to be in a constant state of peace amidst the automotive nightmare: the perpetual noise of motor vehicles, helicopters and aeroplanes; the ear-piercing shrieks of horns and sirens; the continuous chants of competing loudspeakers; the horrific music of the transistors and the pungent smell and suffocating effect of exhaust fumes.

One of the aims of Hajj is to acquaint the pilgrims with the historical and the spiritual environment of the Prophet — peace be upon Him — so that they may derive inspiration and strengthen their faith. Walking on the pathways used by the Prophet can be phenomenally uplifting. Driving through formidable traffic jams, or plodding on concrete roads, dodging cars and human waste and debris generates only fatigue. In present-day Muna what is experienced is not the environment of the Prophet, but the surroundings of Manhattan; and there are no spiritual gains to be made by experiencing the urban dystopia.

Cleanliness is part of the faith, says the tradition. It is certainly a requirement for any part of spiritual experience. Yet the environment of the Hajj is indescribably wretched and insanitary. This is partly due to the lack of adequate toilets (in number and in design); partly due to urban pressure on Mecca and its environs; and partly due to the unhygienic habits of some pilgrims. The end result is that many pilgrims spend much of their time during Hajj avoiding filth



and debris rather than in prayer and supplication.

These then are some of the noises that are generated during the modern-day Hajj. It now becomes evident that the best way to return to the ideal Hajj is to remove as much of the noise component from the modern-day Hajj as possible. A corollary of this realisation is that the traditional character of Mecca and the Holy Sanctuaries must be conserved and, where necessary, renovated.

These were also the conclusions of the First Hajj Seminar recently held at the Hajj Research Centre. A few of the recommendations of the Seminar are worth quoting:

- (1) The Hajj Research Centre should, at the appropriate time, take up with the highest authorities the question of the drastic physical changes in Mecca, Medina and the Holy Sanctuaries (and in particular Muna) with the aim of:

- (a) Suspending all demolition and construction projects for reconsideration in view of their far-reaching and irrevocable character.

- (b) Establishing conservation and renovation policies and projects for these sanctuaries so that they retain their original pristine and traditional character.

- (2) That since Mecca is *Umm-al-Qurra* to the entire Muslim world and since as such it is bound to be imitated, all new development projects should be of the highest quality, respecting both the traditional Islamic character of the city and the natural environment of the landscape.

That in Muna, Muzdalifah and Arafat no permanent structures for the pilgrims should be erected (unless absolutely necessary) and that the use of the lightweight, collapsible and temporary structure should be enforced for the duration of the Hajj, thereby remaining in harmony with *ihram* and its implications of primordial simplicity.

- (3) That strong and strictly enforced environmental con-

trols be established immediately in order to restore the purity and peace of the Holy Sanctuaries. The following examples represent a minimum of what is required:

- (a) The use of internal-combustion-engine-propelled vehicles should be strictly prohibited except in emergency and for essential services (transport of food, water and tents, etc.). In the whole district between Mecca and Arafat all pilgrims, except the infirm, should go on foot or ride on animals.

- (b) Noise should be eliminated by:

- (i) by disconnecting horns

- (ii) by prohibiting the use of non-emergency sirens and loudspeakers.

- (iii) by prohibiting transistors and other radios.

- (iv) by prohibiting the intrusion of helicopters.

- (c) Visual intrusion should be eliminated by removing high-mast lighting, neon advertisement, etc. and replacing these, in the few cases where it might be necessary, by more appropriate solutions . . .

I think I have said enough to make it clear that, at present, the physical dimension of Hajj is much overburdened. There is a critical, but natural balance between the physical and the spiritual dimensions of Hajj. If the physical dimension of the Hajj is too far removed from the original environment of the Prophet — peace be upon Him — and saturated with noise, it impedes the spiritual development of the pilgrims. As such the need for target-oriented research on Hajj to make the physical and spiritual path of the pilgrims easy and to preserve the original pristine character of the Holy Sanctuaries is obvious. Research on the problems of Hajj is the first step towards the sacred journey of the ideal Hajj.

Praise be to Allah in the end as in the beginning.



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## 3 THE FRAMEWORK FOR HAJJ SIMULATION MODELS: A PRELIMINARY REPORT

J. Ismael Gibson

### *Introduction: The Need for Simulation Models*

The growth in the number of pilgrims in the last two decades, coupled with the development strategies pursued in the Holy Cities of Mecca and Medina, has caused enormous numbers of complex and uniquely inter-related problems.

Indeed, it is this complex interrelationship of problems which is, in fact, the biggest and most difficult problem of all. This is why when solutions to specific problems are executed, a dozen other problems spring up in their place like the teeth of the Hydra. In other words, repercussions and after-effects are unforeseen. It is obvious, for example, that any improvement in the water-supply system for the Hajj must be accompanied by a similar improvement in the sewage network. However, it is much more difficult to analyse the relationship between general physical improvements to the Hajj and the consequent effects on religious experience or the effect of decentralisation of pilgrim accommodation on land and property prices.

The objectives of using simulation models for the basic planning of the Hajj as an activity and the Holy Cities of Mecca and Medina is to understand the nature of these complex relationships and to appreciate the consequences of making specific decisions *before* they are executed.

Technically, it is not possible as yet to develop one complete simulation model of the Hajj in its totality. It is far more feasible, and sensible, to develop a set of interrelated models of the various elements — but there must be matrix or framework which connects these sub or elemental models — which in itself, of course, is a model. This paper describes the general framework for this model system being developed at



the Hajj Research Centre.

Model-building is, of course, an intricate operation but the basic building process assumes a simple step-by-step approach, the main tasks of which are:

- (1) Define the objective and purposes of the model system;
- (2) assume a model system which should be described as fully as possible;
- (3) collect relevant information for use in the model system; and
- (4) test the model system until the model simulates 'reality' as nearly as possible.

The Hajj Research Centre has accomplished Stages 1 and 2 and is in the process of Stage 3 (which is intricate and time-consuming). Here we describe the basic framework of the Hajj model system which has three dimensions:

- (1) Geographical scale as a system of enclosed 'cordons';
- (2) 'model components';
- (3) a time system based on the synchronisation of the lunar and solar calendars.

#### *Spatial Framework of the Model System*

The most perplexing problem of the Hajj and indeed, in physical planning itself, is the interrelationship between the various Hajj as well as 'non-Hajj' activities. Thus any simulation model system must truly 'simulate' or copy these interrelationships.

All physical planning simulation models, whether they be regional or urban in scale, are concerned with the interrelationship of activities which results in movements of persons or goods between these activities. A man travels to work; a letter or some item is delivered to a place of activities. In addition to 'movement and communication' activities, there are non-dynamic or consequential activities which are far

more complex to analyse than movement interrelationships. For example, the decay of the inner areas of cities as the result of a series of activities, such as people desiring to live in suburbs, the wrong kind of wealth investment, the functioning of a free-market situation. Today the movement models of a certain kind are well understood (home-work transportation) whereas movement as a total system within an urban area is never, or hardly ever, analysed and studied. Non-dynamic (or more accurately, non-movement) models are not at all developed and are not appreciated generally. For example, an ugly town (in the Western world at least) will not attract the aspiring middle and professional classes to live there: thus the cultural and political aspirations of the citizens will be generally low, therefore initiating a downward trend in overall 'quality'. This downward spiral to urban decay snowballs. In this situation, conservation policies and environmental improvement would have quite specific economic and political spin-offs.

All activities consume a certain amount of space in the three dimensions: a home is a space for certain kinds of activities; so is an office; a factory; a field; a road; a school. A neighbourhood is an aggregate of these spaces. A town is an aggregate of neighbourhoods and districts. A region is an aggregate of towns, rural and 'natural' areas. A country is an aggregate of regions (not necessarily more rational than political expediency or dominance). Thus activities consume space according to definition of that activity. For purposes in the Hajj Research Centre, six fundamental space scales (or geographical scales) have been defined, viz:

- Level One: International model
- Level Two: National identity models
- Level Three: Regional models
- Level Four: Urban models
- Level Five: Community/Neighbourhood models
- Level Six: Building use models.



It is important to appreciate, however, that the model system will not only endeavour to analyse interrelationships between activities at the same geographical scale or level, but also between activities on different model levels (e.g. vehicle traffic generated by airports).

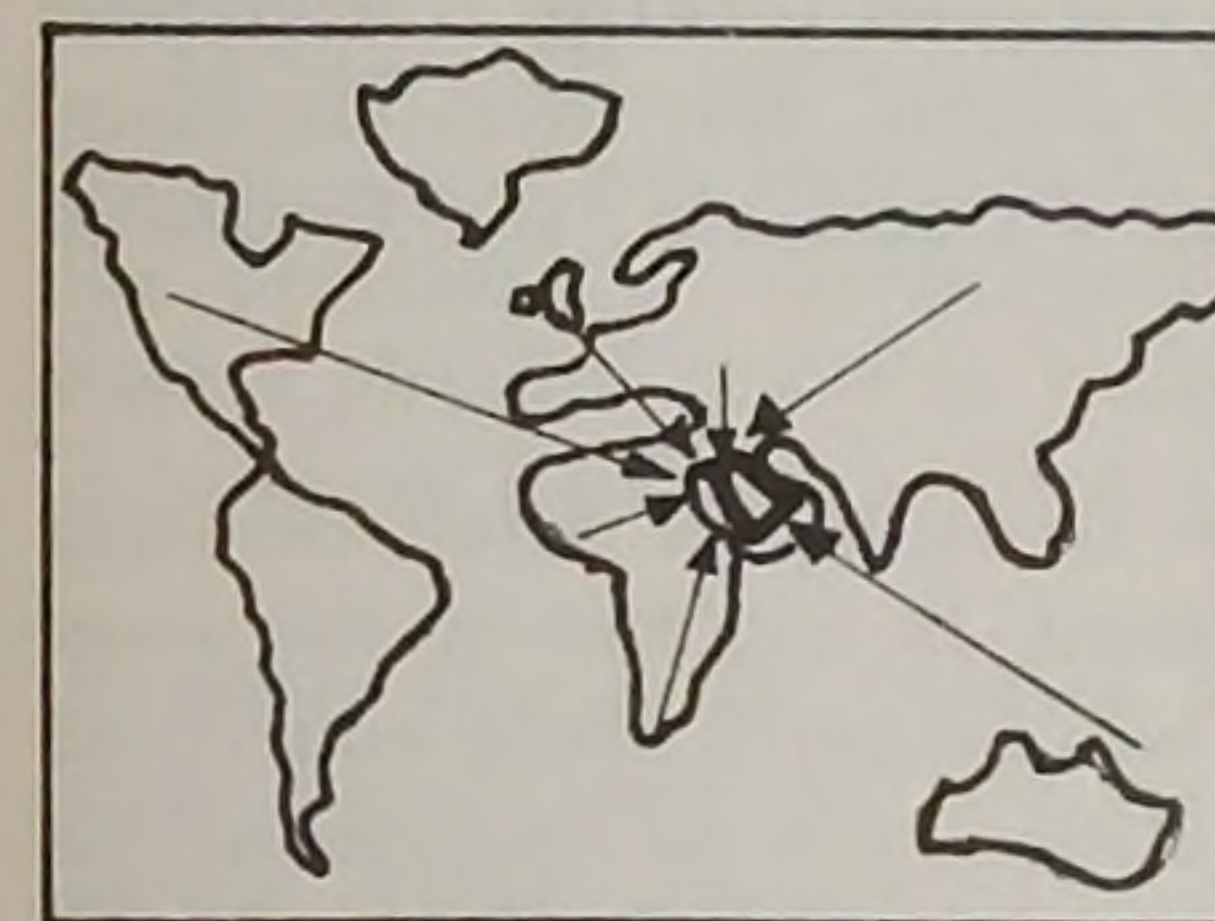
The spatial framework is conceived as a net of geographic cordons, the boundaries of which are clearly defined, as are modern national boundaries, city limits, economic regions, etc. Figure 3.1 illustrates these six scales by cordons directly related to the Hajj.

#### *Objectives of the Models at the Different Levels*

Although the Hajj Research Centre is generally interested in the whole earth model as an idea, it is quite impossible within our terms of reference to simulate it. Other bodies and institutes are well advanced in this respect, e.g. the Club of Rome, the Hudson Institute. The Hajj Research Centre is primarily concerned with one activity in the whole earth model, i.e. the Hajj. Therefore, the activities which we study at the various geographic scales or levels are highly selective, possessing specific elements as objects of study. These are briefly described below.

*The International Scale* The objective is to study the origins, travel movement system and socio-economic characteristics of Hajj and the Muslim world in the past, present and future within the context of the international socio-economic and political system. This is to ascertain the level of desire, demand and potential growth of the Hajj.

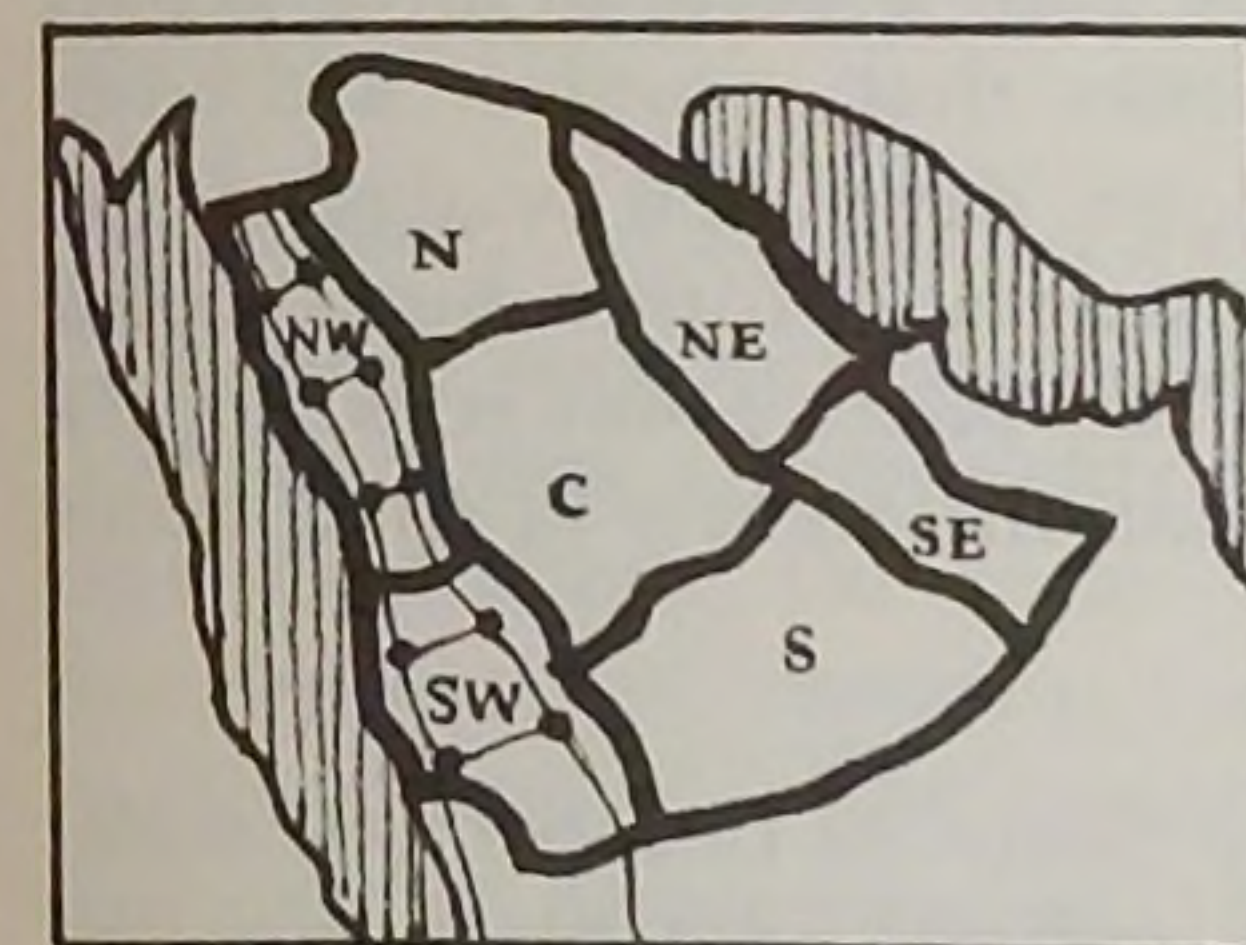
*National Identity Scale* The objective is to study the past, present and future aspects of each national identity with respect to socio-economic and political characteristics in considerable depth. More immediately, however, the Hajj Research Centre will be focusing its attention upon the situation within the Kingdom of Saudi Arabia in order to analyse the services and capacities provided for the Hajj within the



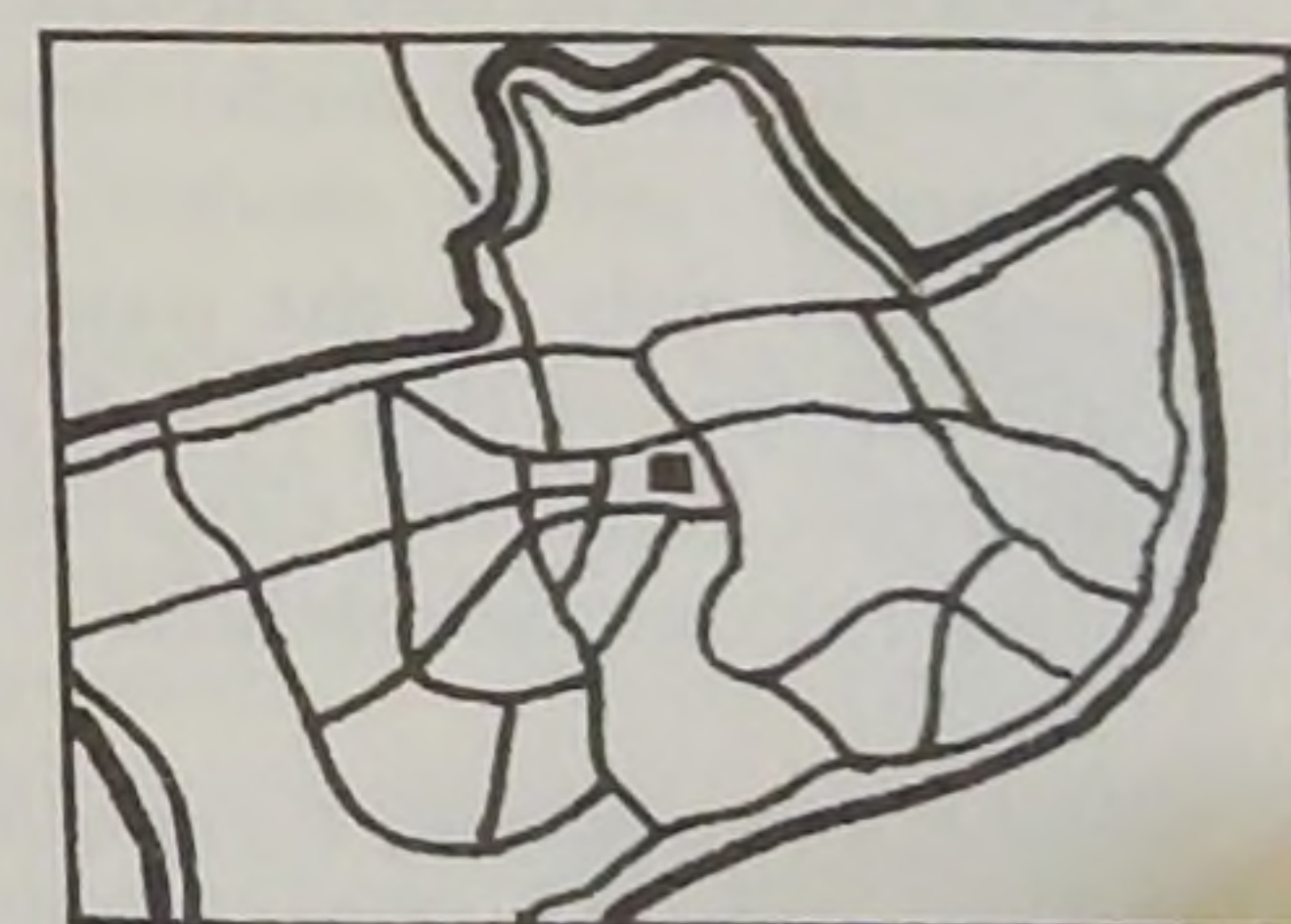
LEVEL ONE  
International model



LEVEL TWO  
National model (Saudi Arabia)



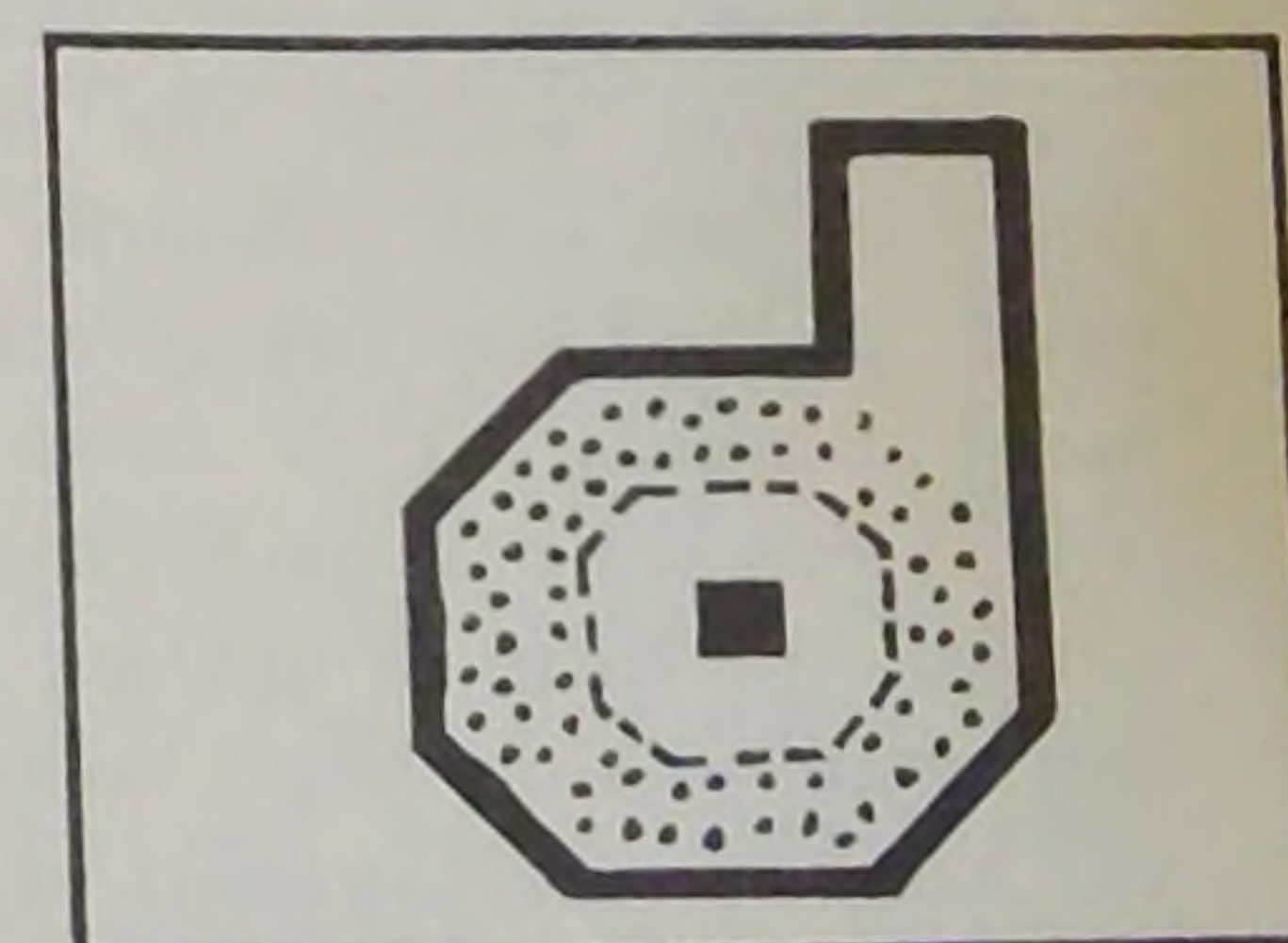
LEVEL THREE  
Regional models



LEVEL FOUR  
Urban models



LEVEL FIVE  
Neighbourhood models



LEVEL SIX  
Building use analysis models

Figure 3



Saudi system. (The concept of national identity is used here as manifested in the creation of a state. But there are many nationalities who do not possess a state, e.g., the Eritreans, the Palestinians, the Armenians.)

*Regional Scale* The objective is to study in detail elements of the national system contained in regions in the past, present and future. The studies will be particularly concerned with movement and communications, and an analysis of the economic benefits and effects of the Hajj upon the particular region under scrutiny.

*Urban Scale* At the urban scale, particularly in the Holy Cities of Mecca and Medina, the Hajj is such an integral part of the system of both these cities that complete and comprehensive urban models will be developed analysing the cities not only in the past, present and future but also for Hajj and out-of-Hajj situations: this latter point is extremely important since the cities function differently at these times during the annual calendar.

*Neighbourhood and Community Scale* At this intimate scale, the neighbourhood is normally defined as a study zone of the urban model system and, as we stated before, the urban model is an analysis of the interrelationship of activities which are conveniently aggregated into zones or neighbourhoods enclosed by clearly defined cordons.

Although movement and communications are important components within the neighbourhood *per se*, physical planners are also primarily interested in specific activities (such as land use categories), social phenomena and investment formats. It is most important to understand that it is at this scale of model that statistics (such as demographic data in the form of age/sex structure, density of population and employment) begin to assume a three-dimensional form, i.e. housing development at, for example, 200 persons per hectare, can be envisaged as an actual volume of built devel-

opment.

At this scale, the reality of the Hajj would be really appreciated, since any increase in density of population owing to the provision of accommodation for Hajjis can be seen to have a physical result in built form and an economic impact in terms of land and property values.

*Building Use Scale* Studies and model developments at this scale would analyse the movement patterns and activities within certain important buildings with the aid of simulation techniques. The *Haram* in the Holy City of Mecca, for example, contains certain religious activities which are absolutely critical to the whole movement network of the Hajj and which directly affect the complete Hajj movement system.

#### *Components of the Model System*

It is both appropriate and convenient that for the purposes of identifying components within the six scales of models described above, the scales of models are grouped together on the basis of common components. In international and national 'models', the region, however defined, is the smallest unit of disaggregation. In other words, the world system and national systems are normally described as aggregates of regions. Thus the format of information used for regional analyses such as the categories of industrial and economic activity, housing and population statistics, agricultural production are described in basically the same units the world over. (There is only a dissimilarity on category specification and classifications.) In fact, it should be said that the components for all levels of the model system are common and universal throughout. The real differentiation between the model scales is purely a matter of disaggregation; for example, housing statistics for neighbourhoods are much more detailed in analysis than regional housing statistics which do not specify occupation rates, house types in terms of available bedrooms, dwelling mixes, etc. Thus the model



levels are conveniently grouped according to the same degree of disaggregation, as shown in Table 3.1.

Table 3.1

## Group One Models:

- International Scale
- National Scale
- Regional Scale

## Group Two Models:

- Urban Scale
- Neighbourhood Scale

## Group Three Models:

- Building Use and Activities

Table 3.2: Basic Component Categories of the Three Groups

<i>1. Groups One and Two</i>	
(a) Demographic data	
(b) Economic Data:	
(i) Stock of resources	(Natural resources + imports)
(ii) Manpower characteristics	(Job classifications)
(iii) Resource and material	
(iv) Processing stock	(Industry - building and plant)
(c) Cultural characteristics	(Religion, tradition, etc.)
(d) Interaction:	
(i) Movement of persons and materials	(All transport models)
(ii) Telecommunications	
(iii) Overland and underground Services	(Sewerage, oil, gas pipelines)
(iv) Investment power	
(e) Society relations:	
(i) Government and associated organisations	(Law and community services)
(ii) Private and public institutions	
(f) Spatial Data	(Land use)
<i>2. Group Three</i>	
(a) Activity data	
(b) Building form	(Existing or architectural brief)
(c) Building efficiency	

*Group One Models.* It would be both superfluous and inappropriate at this preliminary stage to prepare detailed disaggregations of international, national and regional models, particularly when we are concerned with one event, the Hajj, which must be viewed in relationship to the 'whole world' models. Ease of transport, removal of travel restrictions in all countries and the general rise in the standards of living throughout the globe have been the major factors which have influenced the increase in the number of pilgrims. Thus, in order to predict with a reliable degree of accuracy the future pilgrim numbers, each of these three factors has to be analysed and quantified. This is a mammoth task, yet some work on this has been accomplished and a breakthrough made at composing workable formulae. Nevertheless, the task of preparing reliable whole world models is mammoth in proportions and extremely complex. Even the task of analysing the trends in the Muslim world is colossal and data available to date are unreliable. Therefore, much work has to be done and much time has to pass before predictions for future pilgrims become reliable — but of course, the Holy Places themselves impose numerical restrictions because of natural capacity of the area's limits: probably a more sensible viewpoint to the problem.

*Group Two Models (Disaggregation of 'Components' into 'Elements'):* *Urban and Neighbourhood Scale Models.* Urban and neighbourhood models differ quite significantly from international, national and regional models in that the degree or fineness of disaggregation is concentrated mainly on human activities and rather less on crude volumetric and econometric data. Thus models on investment in a town are much less common than, say, 'transportation' models. In order to understand the true nature of functioning of an urban area, a more balanced approach to urban modelling must be encouraged. This would be facilitated by developing a set of elemental models derived from an analysis of the various elements of an urban system.



A further disaggregation outlined above for Groups One and Two would assume the detail shown in Table 3.3.

Table 3.3

1.	<i>Demographic Data</i>		
	Population datum		
	Birth rate		
	Death rate		
	Immigrant rate		
	Emigrant rate		
	Age-sex structure		
2.	<i>Economic Data</i>		
	Stock of any natural resource occurring inside boundary		
	Processing stock (industrial activity)		
	Manpower (existing jobs and job training)		
	Production of wealth usually expressed in money units on volumetric data by interaction of above three components		
3.	<i>Cultural Characteristics</i>		
	Ethnic origins		
	Religions		
	Local traditions		
	Attitudes and life stances		
4.	<i>Interaction</i>		
	Movement of persons (by mode of transport)		
	Movement of materials (by mode of transport)		
	Telecommunications (telephone, telex, telegram, radio, television)		
	Overland and underground services:	Water	
		Gas	
		Sewage	
		Oil	
		Other liquids and gases	
	Investment Flows: Building units + complexes		
	Processing (industrial plant)		
	Community services + statutory undertakings		
	Invisible flows: (e.g. grants for services)		
5.	<i>Society Relations</i>		
	Central Government:	administration:	Health (hospitals)
			Education (higher)
			Housing (finance)
		judiciary	

Local Government:	administration	Health (clinics)
		Education (schools)
		Housing (building)
	social services	
Voluntary services		
6.	<i>Spatial Data</i>	
Dwelling activities	dwelling specification:	Number of bedrooms
		Capacity (no. of persons)
		Dwelling type
		Age of dwelling
		Construction
Leisure + physical development		
	Full classification of sport, leisure and outdoor activities	
Cultural activities:		
	Religious activities	
	Historical societies	
	Arts associations + activities	
	Political associations	
Community services:	(government and private)	
	Social welfare agencies	
	Mental health	
	Physical health:	Clinics
		Hospitals
Economic activities:		
	Full standard industrial classification	
	Banking (banks + building societies)	
	Insurance activities	
Education:	Schools:	Primary + nursery
		Junior
		Secondary
	Colleges and institutes	
	Universities	
Physical defence:	All military activities:	
		Land
		Sea
		Air + space

It is essential to appreciate that in developing a classification of any element within a system, in this case an urban complex, that land-use categories depend upon the conception or perception of the analyst as he sees the system.

In the system proposed for the Holy Cities, there are eight



activity categories which are identified with spiritual, psychological and biological needs required for healthy living for the human species, as illustrated in Table 3.4.

Table 3.4

Activity Category	Basic Function of Activity
1. Dwelling place	Biological maintenance and reproduction of the species
2. Leisure + physical development	Psychological and physical development of species
3. Culture	Relation to creation + reality. Prime motivation of society
4. Community services	Maintenance + support of social + community structure
5. Economic activity	Production of nourishment + wealth
6. Education	Preparation for responsible participation in society
7. Military	Desperate physical survival of species or cultural conflict
8. Non-activity	None

#### *Relationship between Urban Model Components*

The urban model being basically an interaction between confined activities in a cordon (land use), the interactive elements of the system such as transportation and movement, investment patterns, etc. can be shown to interconnect between all the land-use activities, as shown in Table 3.5.

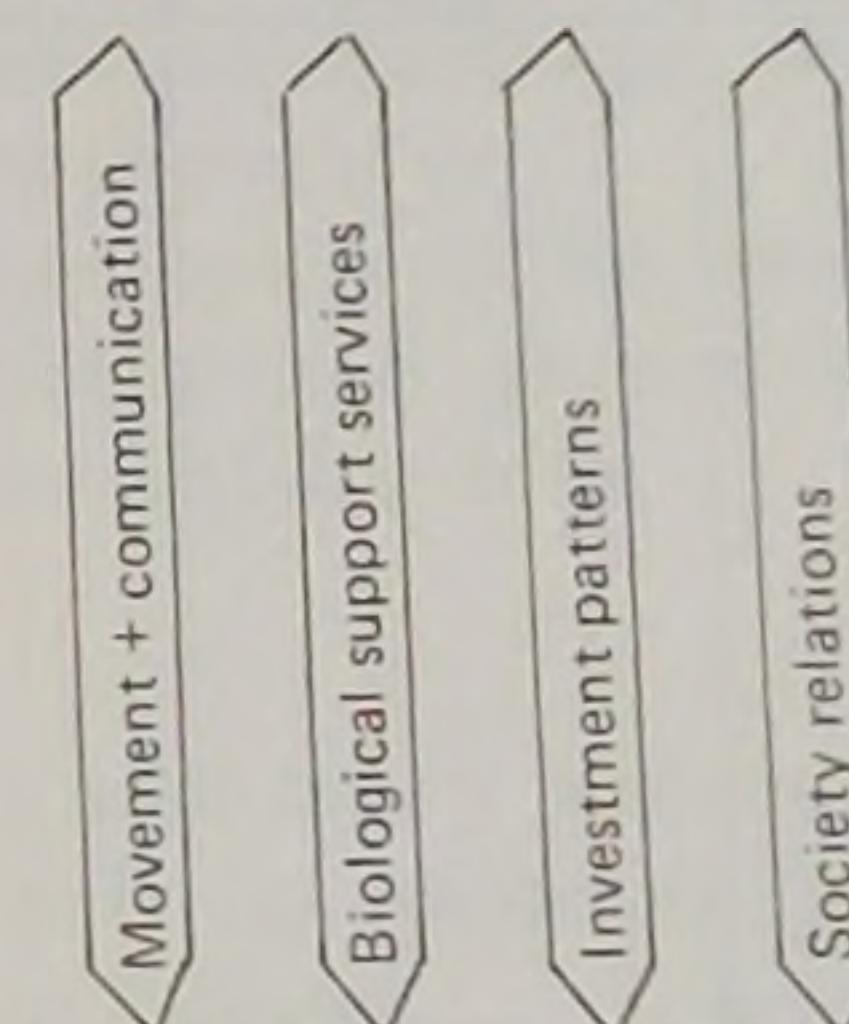
Model components, of course, are not confined to one of the particular model scales we have defined in the simple diagram above. Other models of a special nature, such as an analysis of energy flows, would involve extracting information from all the components defined in the above system. As an example of the former, a comprehensive study of the total Hajj movement system would involve extracting information from all models in the six scales we have defined. A crude flow model of the total Hajj system showing all the possible interconnection combinations is shown in Figure. 3.2.

Table 3.5

Confined Activities (Land Use)

Interactive Model Components

1. Dwelling place activities
2. Leisure and physical development
3. Cultural activities
4. Community services
5. Economic activity
6. Education
7. Cultural conflict (military)
8. Non-activity (wilderness)



#### *Group Three: Building Use Models*

In developing building use models, whether they are intended to formulate a brief for new buildings or for analysis of efficiency of existing buildings, it is essential that the activities within the building are defined, quantified in terms of persons and space and ordered in the correct relationship.

In this respect the work of the Hajj Research Centre, both brief preparation and building efficiency models, will need to be developed. At present, however, work has commenced on an activity analysis of the Sacred Mosque at Mecca with a view to assessing its efficiency.

The basic components of building use models have been enumerated above but are further analysed, viz:

#### *(1) Activity Data*

Define prime functions.

Enumerate, quantify (persons and space) and order into correct time arrangements main activities concerned with prime functions. Enumerate, quantify (persons and space) and order into correct time arrangements secondary and service activities. Design activity model from above analysis.



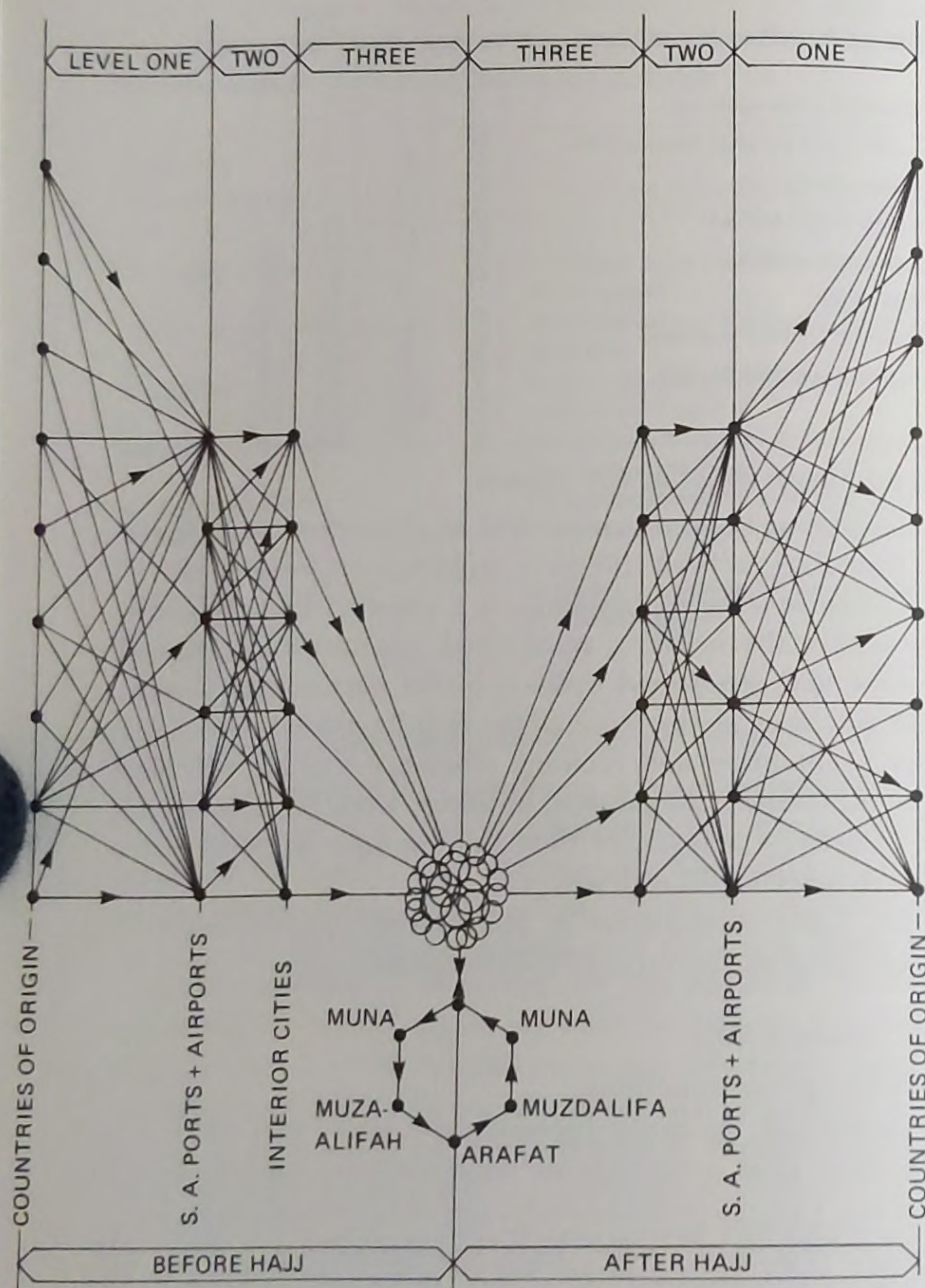


Figure 3.2: The Movement Interrelationships Between Models of Different Scales

### (2) *Building Form*

- (a) In the case of existing buildings, analyse the activities contained therein; or
- (b) in the case of preparing a brief for new buildings compose a comprehensive architectural brief from the analysis of activity data.

### (3) *Building Efficiency*

Assessment of building efficiency will be a result of a comparison of the Activity Model in 1 above and the analysis described in 2 above.

### *Synchronology of the Model System*

In the 'modern' world, Muslim society is quite unique in that it uses two different (yet astronomically connected) time measuring systems – the one lunar, the other solar. The lunar system is primarily employed for specifically religious purposes such as the definition of the calendar which directly affects the time of the month of fasting, the two major Islamic celebrations and, of course, the Hajj.

The solar-based time system affects primarily matters of agriculture and the annual four seasons and because of this, the solar calendar has been adopted as the international time regulation system. Therefore, Muslim communities over the years have come to accept the use of the solar calendar in order to synchronise activities with the rest of the world. In Muslim religious life, the solar calendar affects one religious duty only, the Five Daily Prayers.

As the Hajj is governed by the lunar calendar and because the Muslim world is obliged to synchronise its activities with the solar calendar (e.g. airline schedules, telecommunications), the model system of the Hajj must use both lunar and solar (Hajri + Gregorian) calendars. As such these two systems have to be synchronised. The astronomical calculations necessary for synchronisation are already well known – but there remains the major problem of the measurement and



definition of the lunar months since the months are not mathematically precalculated and as well defined as the solar months. Islamic religious tradition and requirements insist that the lunar months begin when the new moon is actually *sighted* which lends a certain unpredictability as to the days on which fasts begin and end, celebrations are celebrated, and the Day of Arafat – the main day for the performance of Hajj – occurs. Thus the precise solar dates of religious significance in the culture cannot be accurately predicted.

Fortunately the Hajj can only be performed in one specific place, otherwise further problems would arise (as with the celebrations such as Eid al Fitr, New Year) since the solar base dates of the new moons in different parts of the globe occur on different days, which may be as much as four days apart.

It will, therefore, be an important task in the model-building process to devise a system of synchronisation, especially for future predictions. For past events, methods have already been effectively devised for the synchronisation of Muslim and Gregorian calendars.

#### *Conclusion: Which Hajj to Simulate?*

It is intrinsic in the very nature of simulation models that they 'copy' another, usually real-world, model. Thus in a simulation model of the Hajj, the question must be asked as to which or what kind of Hajj should be simulated. There are many options of which there are four basic groups:

- (1) The Hajjs of the Past.
- (2) The Hajjs of the Present Day.
- (3) The Alternative Hajjs of the Future.
- (4) The Ideal Hajj.

The Hajjs of the past are bygone and it is purely of academic interest to simulate them – although simulations of past Hajjs would help in analysing trends. But it would be of supreme importance to simulate the Farewell Hajj of the

Apostle of Allah, since such an analysis would be of immense value in preparing an ideal model – for to accomplish the Hajj as the Apostle did it would be the perfect Hajj, the ideal Hajj.

It is therefore most important to appreciate that the work of the Hajj Research Centre is highly goal-oriented – not just in solving problems but that the Hajj should be perfectly performed as any other Islamic religious duties: the sources of design criteria are to be found in the traditional sources of Islamic Law which are namely the Holy Qur'an, *Sunnah* of the Apostle, the *Ijma* or the consensus of the *ulema* and *qiyas* or analogies drawn for the Qur'an and the *Sunnah*.

We can briefly enumerate the conditions of performing Hajj which are inviolate:

- (1) The Hajj should be performed according to the prescribed ritual as defined in the *Shair'a*.
- (2) The Hajj should be performed in such a manner as to emulate the Hajj performed by the Apostle.
- (3) The Hajj should be performed in an environment appropriate to the spiritual and religious significance of the ritual.

Since full spiritual benefit is to be obtained from a perfectly performed Hajj, these conditions will have to be as fully defined as possible. When this is accomplished, design standards will have been defined – and therefore the ideal model can be simulated. At this point, the real-world Hajj of present days can be simulated and various policies and planning strategies can be tested on the computer in order to bring the real world model towards and finally in congruence with the ideal and perfect Hajj.

This is the objective of our research at the Hajj Research Centre. It is certainly not our objective to solve problems willy-nilly as they arise. On the contrary, we have a vision of the ideal Hajj as performed by the Last Messenger of Allah – peace and blessings be upon Him. The framework outlined



in this paper will take us just one step closer towards this vision.

#### Appendix: List of Government and Consultant Reports

- |                   |                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Model Level One   | (1) Composite Hajj Statistics (all years) Ministry of Hajj and Auqaf Kingdom of Saudi Arabia                                   |
| Model Level Two   | (2) National Second Five Year Plan for the Kingdom of Saudi Arabia<br>Central Planning Organisation<br>Kingdom of Saudi Arabia |
|                   | (3) National Transport Study for Kingdom of Saudi Arabia (1976)<br>United Nations                                              |
|                   | (4) National Bus Study for Kingdom of Saudi Arabia (1976)<br>Economist Intelligence Unit —<br>Transport Management Services    |
| Model Level Three | (5) Regional Framework Western Region Plan (1972)<br>Ministry of Interior and<br>Robert Matthew Johnson-Marshall and Partners  |
|                   | (6) Public Transport in Mecca, Medina and Jeddah (Oct. 1976)<br>Ministry of Interior<br>Jamieson McKay and Partners            |

- |                  |                                                                                                                                      |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Model Level Four | (7) Master Plan for the Holy City of Mecca (1974)<br>Ministry of Interior advised by<br>Robert Matthew Johnson-Marshall and Partners |
| Model Level Five | (8) Holy City of Mecca<br>Mecca Central Action Area* (1975)                                                                          |
|                  | (9) Holy City of Mecca<br>Mecca West Action Area* (1975)                                                                             |
|                  | (10) Holy City of Mecca<br>Mecca South Action Area* (1975)                                                                           |
|                  | *Ministry of Interior and Robert Matthew Johnson-Marshall and Partners                                                               |
|                  | (11) Special Action Area Study (1975)<br>Holy Area of Muna, Aziziyah and Al Adl Stage 1                                              |
|                  | (12) Special Action Area Study (1975)<br>Holy Area of Muna, Aziziyah and Al Adl Stage 2                                              |
|                  | (13) Special Action Area Study (1975)<br>Holy Area of Muna, Aziziyah and Al Adl Stage 3                                              |



## 4 PILGRIM ACCOMMODATION IN MECCA: SPATIAL STRUCTURES, COSTS AND NATIONAL ORIGINS

Ghazy Abdul Wahed Makky

### *Introduction*

Mecca is the most Holy City of Islam. As the location for the House of Allah, the site of Mecca has been important since the time of Prophet Abraham — peace be upon Him. After the advent of the Prophet Muhammad, Mecca gained the status of the prime focus of the Muslim world.

A consequence of the importance of Mecca as a religious and cultural centre has been the rate of growth of the city. Mecca's growth has been out of proportion to the ability of its site and region to support its population. The population of Mecca is further augmented, although momentarily, by the Hajj — the annual pilgrimage to Mecca. The Hajj is one of the Five Pillars of Islam. It is the duty of every Muslim to perform Hajj once in his or her lifetime provided he or she can bear the economic burden. Over the last two decades there has been a drastic increase in the number of pilgrims to Mecca. As such this annual event, which is the economic base of Mecca, has affected the character of the city, not just during the time of the pilgrimage, but permanently.

The importance of Mecca as a religious centre is symbolised by the mosque in the centre of the city, the *Masjid al-Haram*. It is the focus of the city. Mecca's entire spatial structure is oriented around the Holy Mosque.

The make-up of the population of Mecca reflects the city's function. Mecca attracts people from the whole of the Islamic world. While most are temporary visitors, there has grown up in the city a permanent heterogeneous popula-



tion of diverse national origins. Mecca is a microcosm of the entire world of Islam. Moreover, these diverse cultural origins are reflected in the cultural landscape of the city. This, for example, is highlighted by the Indian and West African neighbourhoods of Mecca. For individual pilgrims, the Hajj is a religious and emotional experience of the highest order. However, for those in charge of the administration of the Hajj, the organisational and logistical problems are immense. Pilgrims must be provided with food, including a sheep or other animal to be slaughtered as a part of the pilgrimage rite, water, always a dear commodity in Mecca, transportation, health care guidance and housing.

In terms of housing, one can hardly think of a more insurmountable problem. The rites of Hajj require that all pilgrims be in certain places at specified times: three days at Muna, one day at Arafat where the single most important rite, the 'standing' at Arafat, takes place and one night at Muzdalifah. Enormous tent cities are set up to accommodate the pilgrims, only to disappear immediately afterwards.

At another level, pilgrims must be housed in more orthodox settings over the duration of their stay in Mecca. This housing is my concern in this paper.

#### *Data and Methodology*

Primary data for this study were obtained in the last few years and in October of 1975. Even though I can summarise only a few of the principal findings, let me describe the overall scope of the study as briefly as possible. A preliminary survey was made in Mecca to identify those regions of the city where pilgrim housing is located. A division of that area into five zones was then made so that a spatially stratified sample could be taken. Sample residences were then chosen within each zone by random sample.

University students were engaged and trained in the administration of the questionnaire. The main survey was taken on 6 December 1975 (the third day of Dhu Al-Hijjah), through the co-operation of the Hajj Research Centre.

A total of 222 questionnaires were completed, giving us information on that number of persons in one-room accommodation. For each rental location, its distance from the *Masjid al-Haram* and its elevation were computed. In addition, each location was rated as either difficult or easy in its accessibility to the Mosque.

Interview data, obtained only from pilgrims themselves, yielded the following information: *rental cost, accommodation size, number of residents, nationality, quality* (based on a composite evaluation of a number of amenity factors), *type of rental* (whether the pilgrims rented the accommodation from the owner, the occupier, a pilgrim leader of the same nationality as the pilgrim, or a pilgrim agent from Mecca), and the comments and complaints of the pilgrims.

Data obtained from the survey were subjected to a series of statistical tests: simple correlation, analysis of variance, and Chi-square.

#### *Principal Findings*

The single major finding is simply a confirmation that rents in Mecca for pilgrims range from high to very high. The mean rent for single-room accommodation was 4,576 riyals; the mass size being 53m<sup>3</sup>, with a mean occupancy of seven persons. On our scale the mean quality was 5.2 while the mean pilgrim attitude was 1.6.

The location factor was found to be a mean distance of 874 metres from the Holy Mosque.

The remaining conclusions that I will discuss are summarised under two headings: (1) 'Spatial Structure of Housing Costs' and (2) 'Patterns of Residence by National Origin'.

#### *Pilgrim Housing Costs*

The variation in a number of characteristics of rental housing with respect to distance from the *Masjid al-Haram* was examined. It was expected that the rent per accommodation would diminish with increasing distance from the Mosque, that there would be a reasonably strong correlation. While



there is a positive correlation, it is weaker than expected. Moreover, the relationship is non-linear. Rent declines with increasing distance from the Mosque up to a point, at which a rise in rent occurs largely as a function of the *quality* of housing in the newer areas of the city. Figure 4.1 illustrates the room rentals in US dollars around the *Masjid al-Haram*.

Because rent generally decreased at different rates in different directions, it became necessary to look at the correlation between rent and accessibility. Here the correlation was higher between rent cost and what might be called *effort distance* as compared with *linear distance*.

Distance, accessibility and quality get us closer to explaining spatial variation in costs than does distance alone. Further analysis, however, shows that there are more complex factors. To complete the picture one must look at the policies of different national groups, something which will be done in the next section, and examine the very organisation and management of the pilgrimage itself.

Specific to the latter point are the institutions of the Pilgrim Leader and the Pilgrim Agent. The Pilgrim Leader accompanies a group of pilgrims from their home country. He has prior experience in Mecca and aids the pilgrims in numerous ways, including acting as an agent in obtaining their housing. The Pilgrim Agent, the *Mutawwaf*, is from Mecca. Pilgrims are assigned to him and he serves as a general aid and guide. Among his tasks is also the job of obtaining housing. Pilgrims may obtain their housing through either of these two agents, or directly from the owner or occupier.

There are four types of accommodation facilities open to the pilgrims:

The first, the most expensive housing, is that obtained through the *Pilgrim Leader*; it is also of higher quality, larger size, lower density and located at a far distance from the Haram. For these reasons complaints from this type of occupant are the least of all groups.

٢٥٧١ - ١٧١٥ دولار 1715 - 2571 \$  
 ٢٥٧١ دولار ٢٥٧١ More Than 2571 \$  
 ٢٨٦ دولار Less Than 286 \$  
 ٨٥٧ - ٢٨٧ دولار 287 - 857 \$  
 ١٧١٤ - ٨٥٨ دولار 858 - 1714 \$



Figure 4.1: Room Rental 1975 Pilgrimage Period ( US \$ )



The second, being the next most expensive housing, is that obtained through *Pilgrim Agents*, the quality being extremely variable but in general of the lowest grade, smaller size and higher density. This type receives the greatest complaint level even though it is located usually within a short distance of the Haram.

The third is non-owner-occupant rentals, which although of low quality, small size and high density, are located near to the Haram and receive less complaints than owner rentals.

The fourth, which is the least expensive, is owner rentals. These are of high quality, large size and low density and are located at far distance from the Haram and receive more complaints than non-owner rentals.

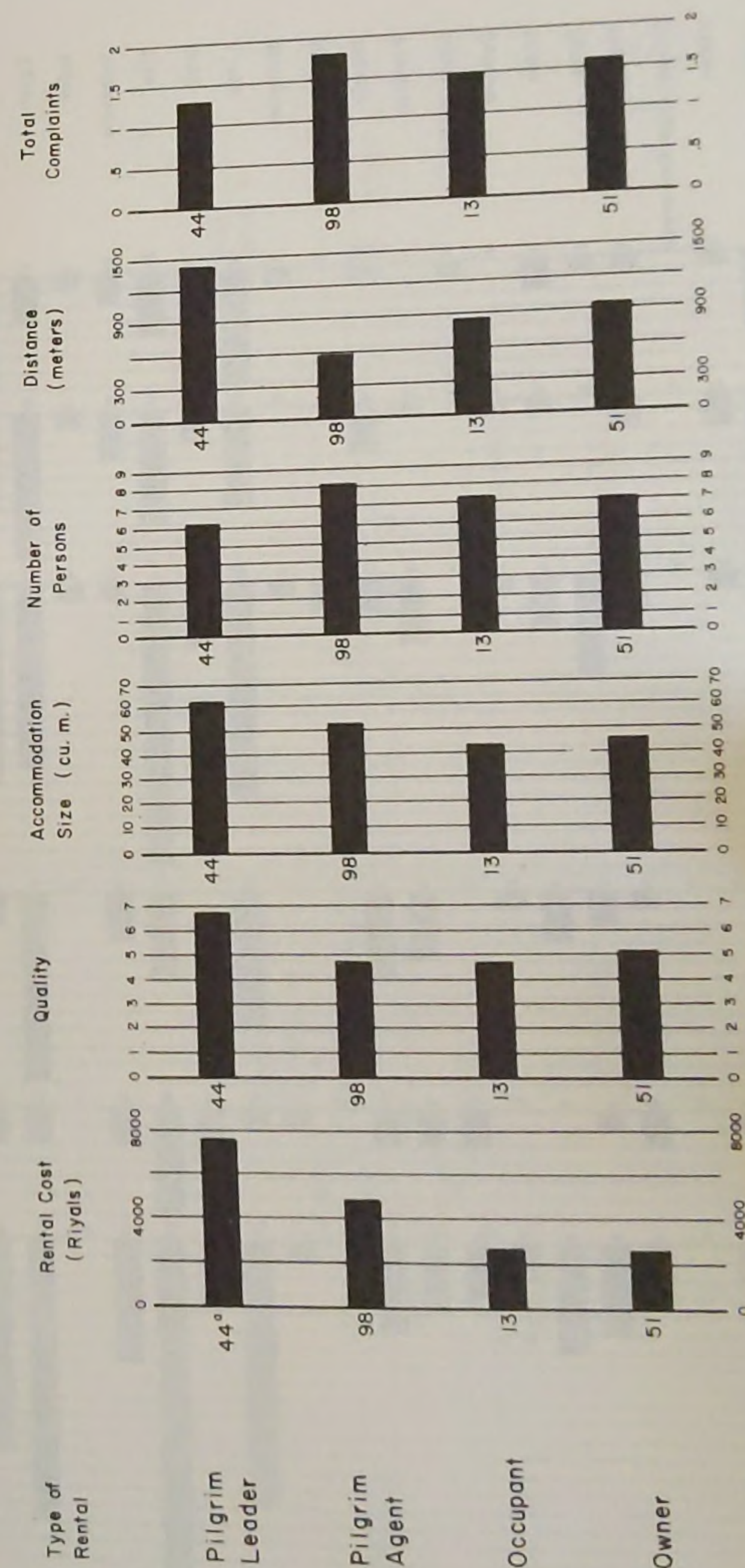
With the exception of complaint factors there exists within each type significant diversity as to cost, quality, size, density and distance from the Haram for each individual room and pilgrim. Figure 4.2 shows the average accommodation characteristics by type of rentals; Figure 4.3 shows the number of complaints by pilgrims' national origin.

#### *Residential Pattern by Nationality*

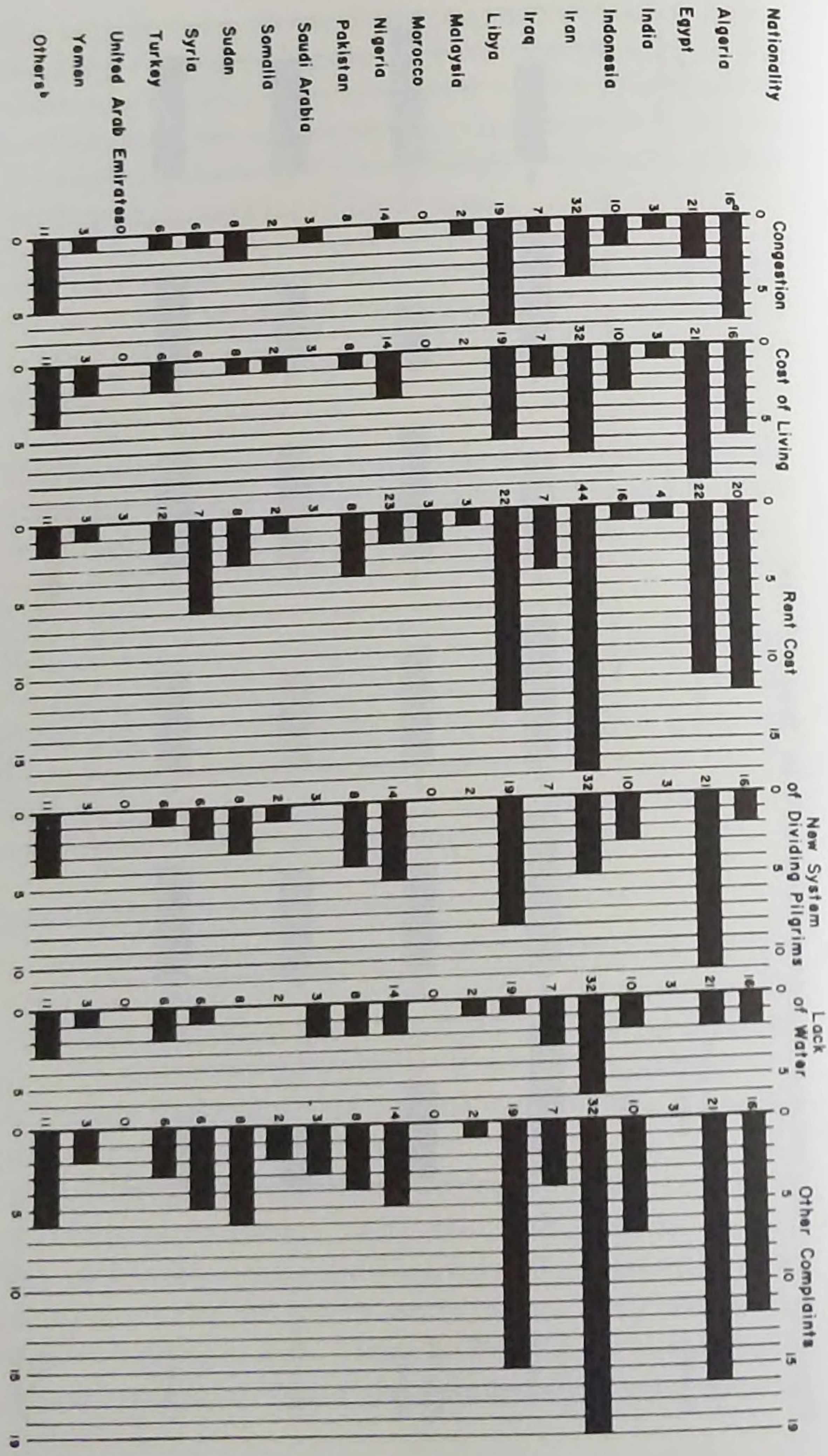
The data on national groupings show a tendency on the part of certain groups to cluster within a short distance from the Haram while others are more dispersed at a greater distance. Figure 4.4 shows the distribution of means for independent variables and nationalities with respect to quality, accommodation, size, rent cost and attitudes.

Of the former groups North Africans, South and South East Asians predominate, while the latter pattern consists mainly of Iranians, Iraqis and Nigerians. The clustering of the Iranians, primarily in newer areas of the city where the quality of housing is high, seems to be related to the policy of Iranian officials. Health delegations accompany certain

Figure 4.2: Average Accommodation Characteristics by Type of Rental







<sup>a</sup>Number of respondents  
<sup>b</sup>Includes eleven nationalities with one response each

Figure 4.4: Distribution of Mean for Independent Variables and Nationality

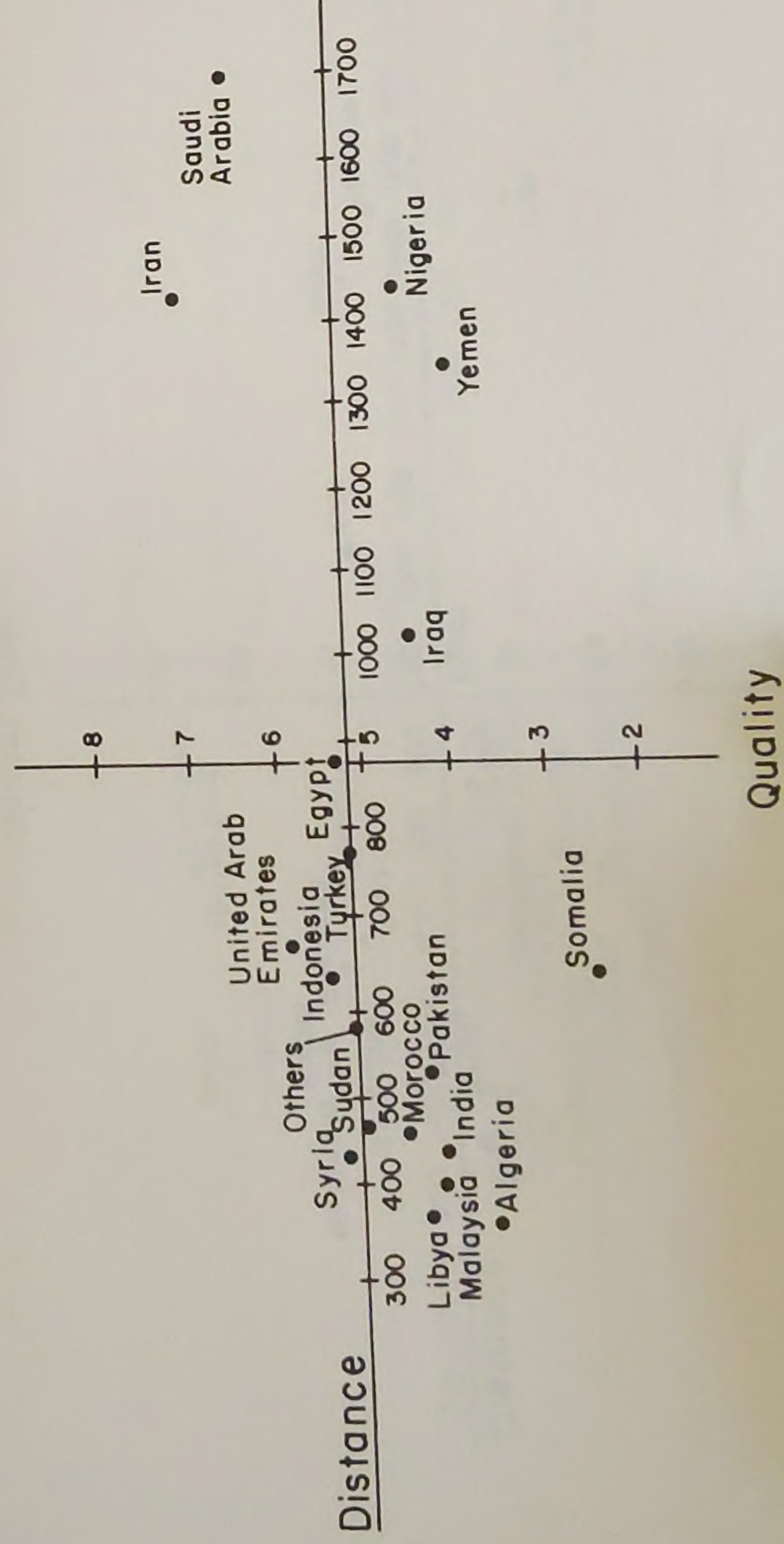




Figure 4.5: Distribution of Mean for Independent Variables and Nationality

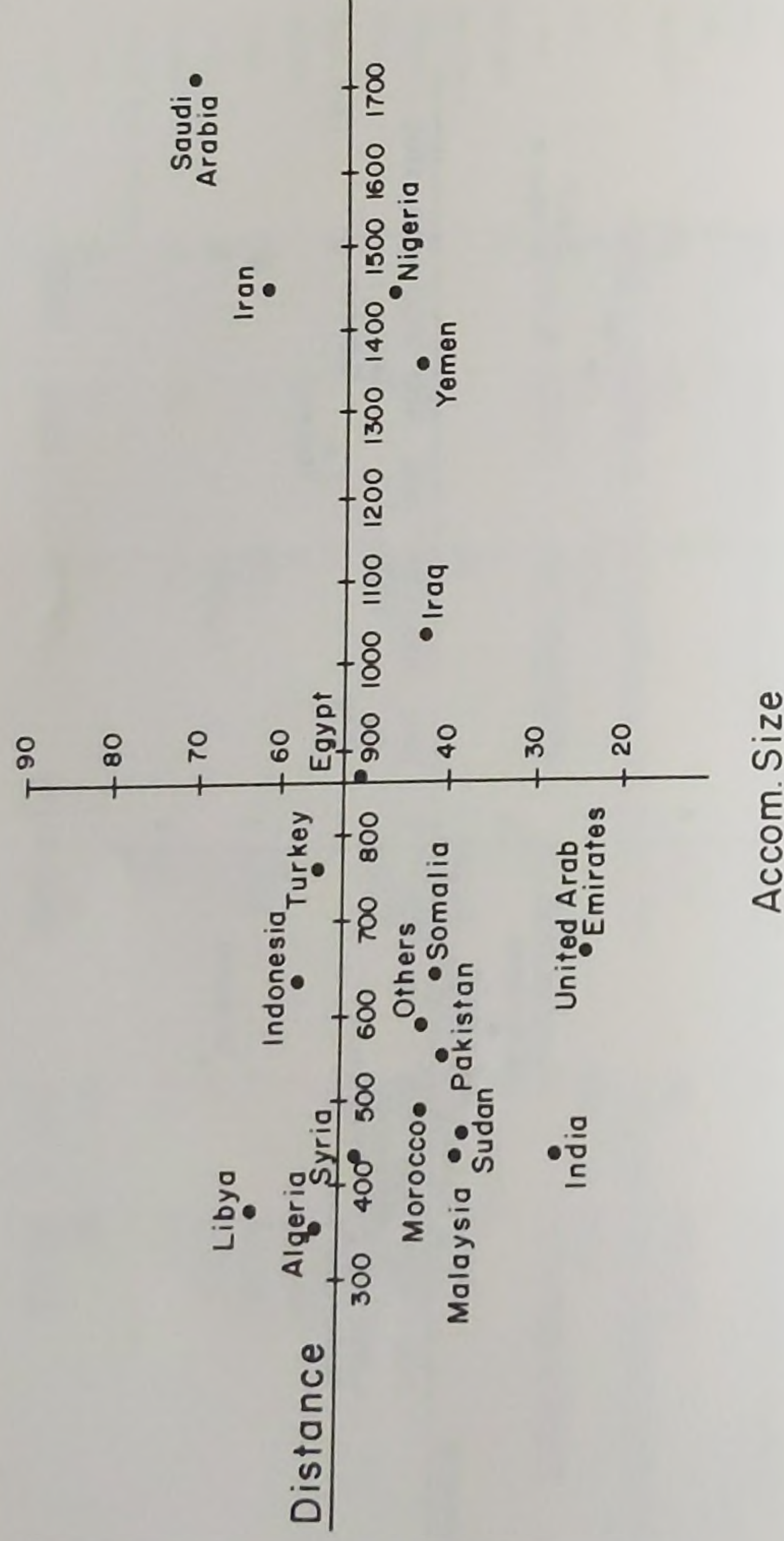


Figure 4.6: Distribution of Mean for Independent Variables and Nationality

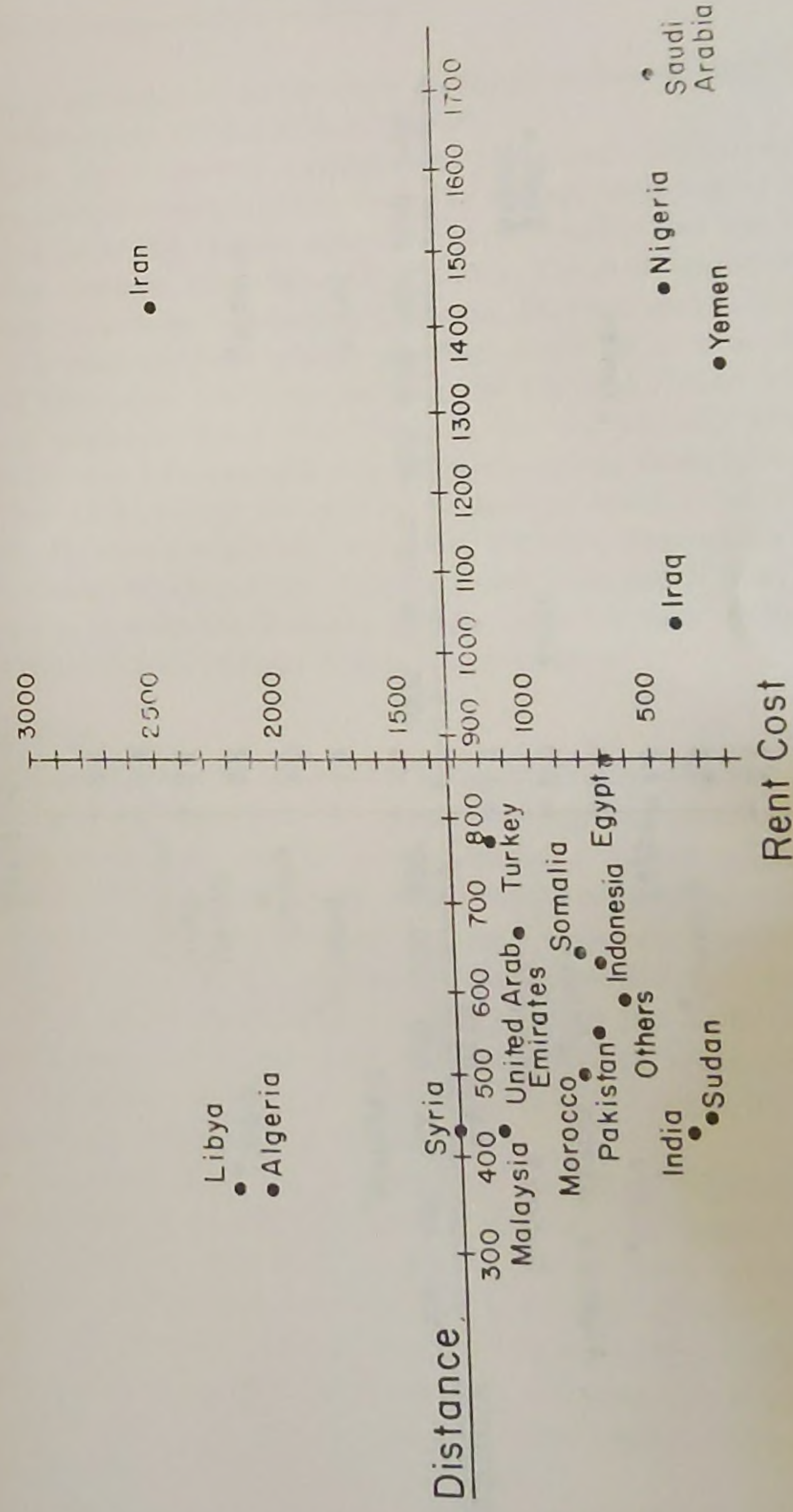
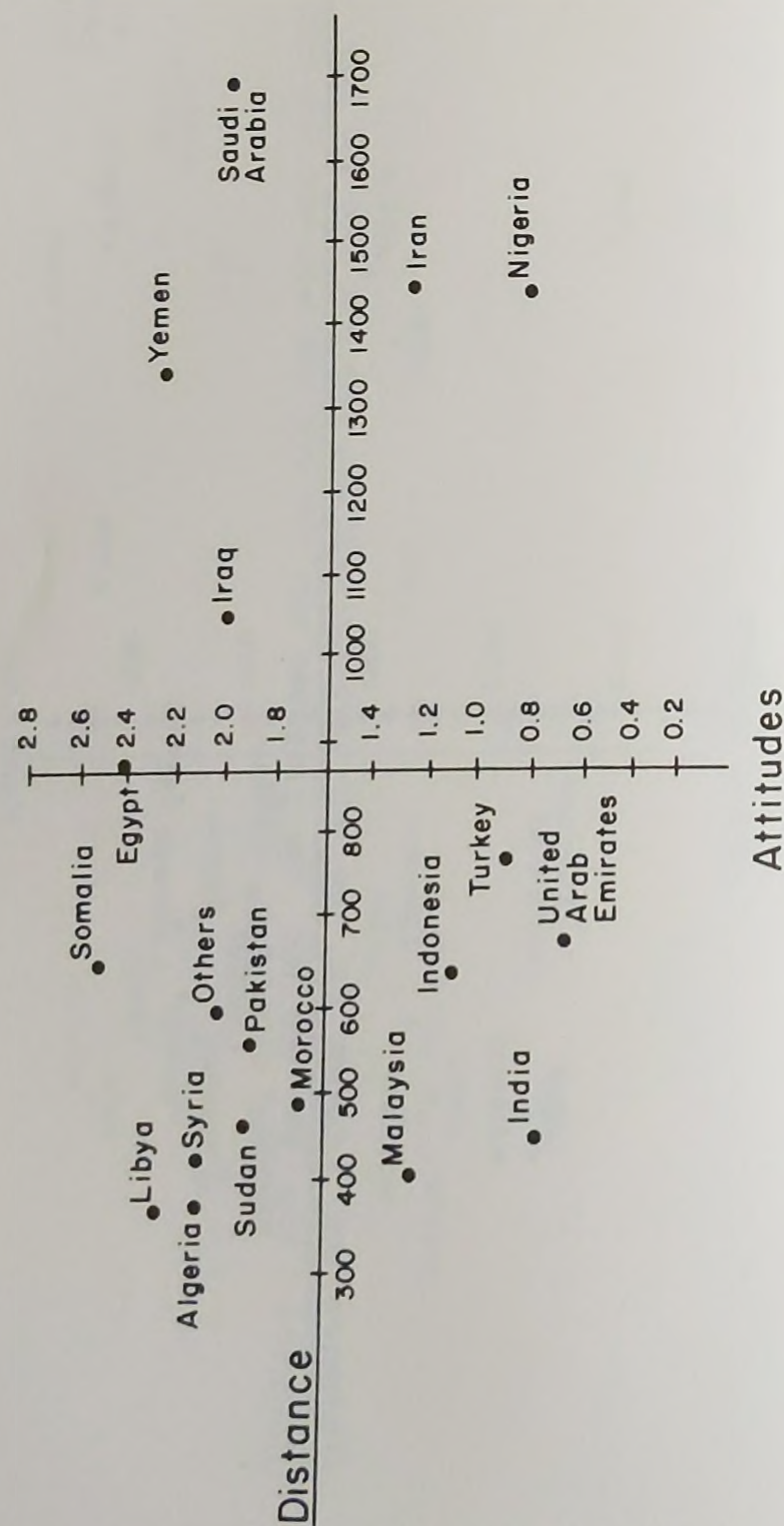




Figure 4.7: Distribution of Mean for Independent Variables and Nationality



pilgrims' groups, and advise their nationals to live in specific areas for reasons of health and comfort.

There are, however, significant locational differences among sampled nationalities from the Haram with regard to distance from the Haram, amount of rent, quality and size of housing, density and pilgrims' attitudes. These relationships become clearer by comparing Iranians, Libyans and Algerians. All three of these groups pay high rents, at or near the top of the range. While the majority of Iranians cluster at a further distance from the Mosque, as has already been discussed, the Libyans and Algerians are among those groups who live close to the Mosque at an average distance of 372 metres. However, while the rents paid are high, the quality of the housing inhabited by Algerians and Libyans is low. It appears as if only the Iranians get fair value for their money. Algerians and Libyans pay dearly for proximity.

### Conclusion

I would be the first to admit that to an individual pilgrim, my concerns as a geographer, interested in the spatial problem of the pilgrimage, are not of much interest. Indeed, pilgrims cope with difficulties in a way which makes them seem minor or non-existent given the transcendental experience which is the Hajj. To many, the pilgrimage should be difficult, for it becomes a more satisfying experience when the difficulties are overcome. Yet in the long run our common responsibilities as Muslims cause us to have a common concern for the quality of the Meccan environment.

At the same time, the problems of individual pilgrims are the problems of all pilgrims, and problems of all pilgrims are the problems of the Hajj. Taken together, these problems necessitate continued research and planning. Research, for example, to further increase quality and quantity of pilgrims' accommodation, public facilities and planning for a greater decentralisation of this accommodation, while improving access to and from the *Masjid al-Haram*.

The government of Saudi Arabia is in a unique position,



for it is responsible to the entire Muslim world as well as to Allah for the management and choreography of humanity's most unique and moving event.

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## 5

MODERN CONCEPT OF HAJJ MANAGEMENT:  
THE EXPERIENCE OF MALAYSIA

Awang Had Saleh

*Introduction*

Malaysia is an area of about 130,000 square miles. It has a population of about 11,149,800 of which about 50 per cent are *Malays*, who by definition are Muslims. Malaysia is a multi-racial, multi-cultural and multi-religious nation, but Islam is the official religion of the country. Islam came to Malaysia (or Malaya as it was then known) in the fourteenth century BC. From the Malaya Sultans' palaces, the teaching of Islam spread to the common folk. As more and more people became knowledgeable in Islam, Qur'anic schools began to mushroom in villages. These schools received severe competition from the secular elementary vernacular schools introduced by the British, who colonised the country in the nineteenth century. Although the Qur'anic schools lost potential pupils to British-sponsored modern secular education, the advanced level of traditional religious schools, better known as the *pondok*, did not. This might have been due to the fact that these *pondoks* were small in number and were founded in rice-growing states which came under the British rule at a later stage. It could also be due to the fact that this institution was harmless compared to the Qur'anic schools that produced the politically oriented *Kaum muda* movement, whose members were trained largely at al-Azhar University. The *pondoks* were founded by the Shaikhs, who normally spent quite a number of years studying Islam from the Ulama at the *Masjid al-Haram* in Mecca.

It was through the efforts of these Shaikhs that Islam began to be taught in the villages, where they commanded a great deal of respect. The villagers would seek their advice in all matters pertaining to the practice of Islam including the



performance of the Hajj. Those financially able among the Muslims would go to Mecca to perform the Hajj. They travelled by land and sea, meeting all kinds of difficulties along the way. When pilgrims began to go to Mecca in large numbers, their travel arrangements and stay in Jeddah, Mecca and Medina were organised in groups by the Shaikh under the management of the *mutawwafs* in Mecca. Every year, before the Hajj season, the *mutawwafs* would go or send their representatives to the villages to recruit the would-be pilgrims. This tradition continued for a long time until about a few decades ago when steps were taken to systematise the organisation of the Hajj. The first attempt at systematic organisation of Hajj began with the establishment of the Pilgrimage Control Board under the Ministry of Home Affairs.

#### *Circumstances Leading to Modern Management of Hajj in Malaysia*

There was, and still is, economic imbalance among the ethnic groups in Malaysia. The modern urban sector of the country is economically well off, but the rural sector is poor as a result of discrimination and neglect on the part of the colonial government. The majority of the Malays live in the rural areas. According to the current five-year plan of Malaysia, about 70 per cent of those earning an income below the poverty line are the Malays. After the country achieved its independence from the British in 1957, the immediate problem facing the country's administration was how to improve the economic position of the Malays. In search for factors contributing to Malay poverty, attention was focused on their practice of Islam. Among the practices examined were the subdivision of land amongst the children in the event of their father's death and the rural people's method of raising funds to finance their pilgrimage to Mecca.

To help the Malays revive their economic position in their own country, two lines of approach seem to have been employed — namely, to improve the present state of affairs

of the Malays through some development schemes and to prevent the present state of their property ownerships from further deteriorating. It is in the context of the latter approach that the financing of Hajj by individual pilgrims from the rural areas was examined.

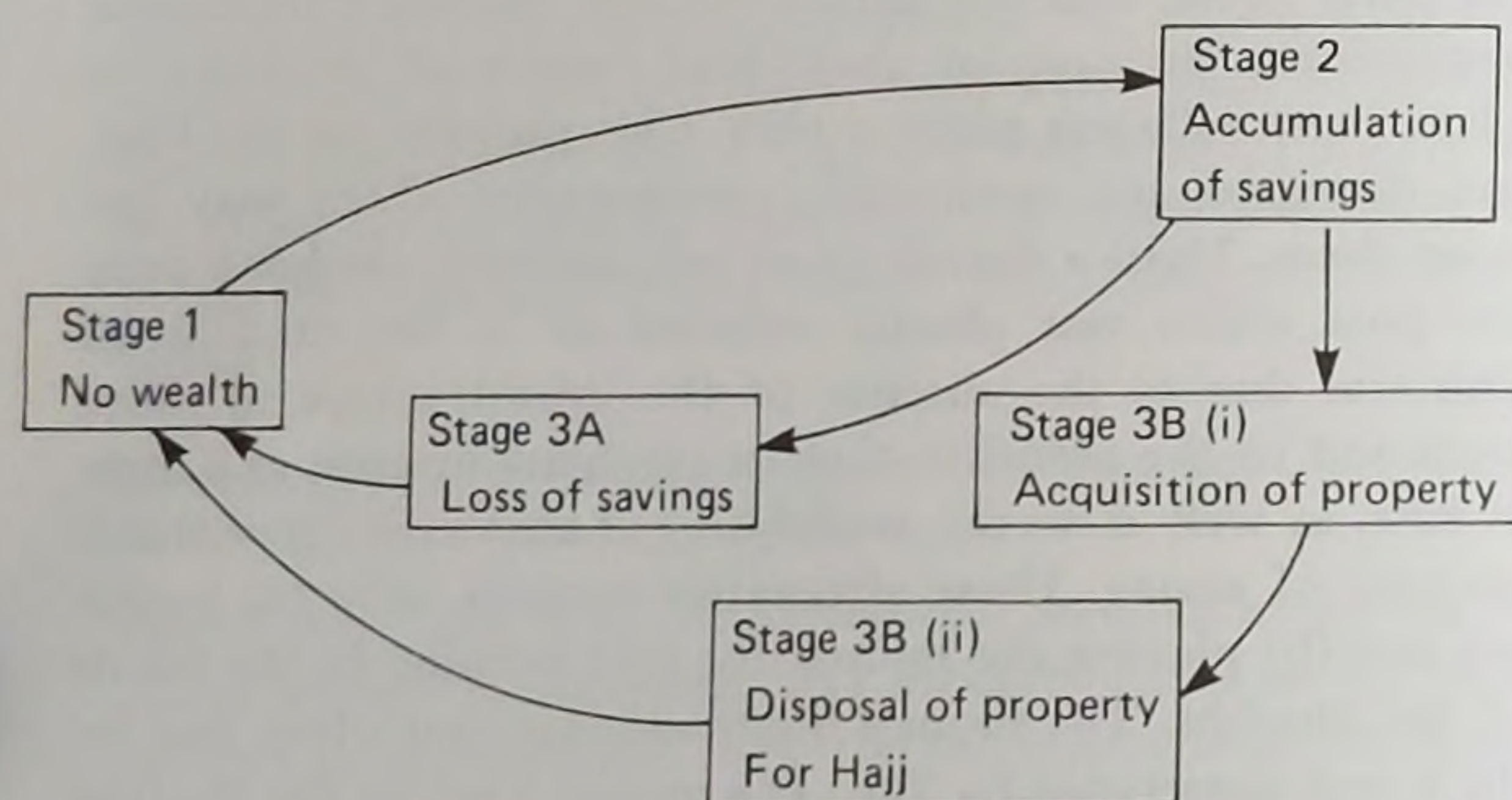
The Malays in the rural segment of the country, especially in the rice-cultivating areas, are noted for being highly religious. This fact is borne out by the number of rural Malays that perform the Hajj every year, and by the fact that it is in the rural areas that we find numerous Islamic educational institutions. Because of their high degree of devotion to Islam these villagers place a very high priority on the Hajj, and disregard any economic consequences which may fall upon them. Until a decade or so ago, saving in the bank or in the post office was almost unheard of in the rural areas. This was due to the absence of the infrastructure in those areas and to the identification of the bank interest as a form of *riba*, as well as to the availability of alternative traditional systems of saving. These alternative systems were (a) hoarding and (b) placing the money for safe keeping in the hands of the Shaikhs. The money hoarded away was often lost by theft and sometimes by fire. The money kept by the Shaikhs was normally safe because of his observation of the *amanah* or trust placed on him. Nevertheless, it occasionally caused confusion in case of death of either party, the Shaikh or the saver.

When the villagers had accumulated enough money through either of the two methods, they would use the money to buy livestock or land. When the villagers decided to go to perform Hajj, they would sell their property or livestock without any economic consideration. Getting rid of the livestock for a good price in time of need for purposes of Hajj would be difficult in the context of the rural market. Similarly, land might have to be sold at a low price in the rural areas where transactions in landed properties were not frequent and where any advertising medium for the sale of land was non-existent.



Seen from the standpoint of the overall effort to improve property ownership among the Malays, there seems to be a cycle of poverty — efforts to gain ownership are negated by disposal of ownership at the time of Hajj (see Figure 5.1).

Figure 5.1: The Poverty Cycle of Malays



A villager would work for years to buy property, and if his savings were not lost by theft or a natural calamity, he would eventually acquire some property. However, if he decided to perform Hajj, he would without hesitation sell his property at a high loss, and, on his return from the pilgrimage, would start once again at Stage 1.

In attempts to prevent further deterioration of the state of property (land) ownership of the Malays, Professor Ungku Abdul Aziz, the Vice-Chancellor of the University of Malaya, developed the concept of the 'Tabang Hajji' — an infrastructure of savings among the Muslims, and in particular among the would-be pilgrims. The idea was to make the farmers

save gradually in advance for the Hajj. This way, the farmers would benefit from (a) the advantage of prior planning; (b) the dividends accrued from investments of their savings; and (c) the avoidance of situations where property would have to be sold at a low price owing to an urgent and immediate need for cash for the Hajj. An added advantage was the protection of money from fire and theft.

#### *The Tabang Hajji'*

The English translation of the name is 'the Hajj fund'. Its actual name when first passed by the Houses of Parliament in 1962 was the Pilgrims Management and Fund Board. By another Act of Parliament in 1969, the name was changed to the Muslim Pilgrimage Control and Savings Corporation, absorbing into it the office of Hajj which was hitherto under the Ministry of Internal Affairs.

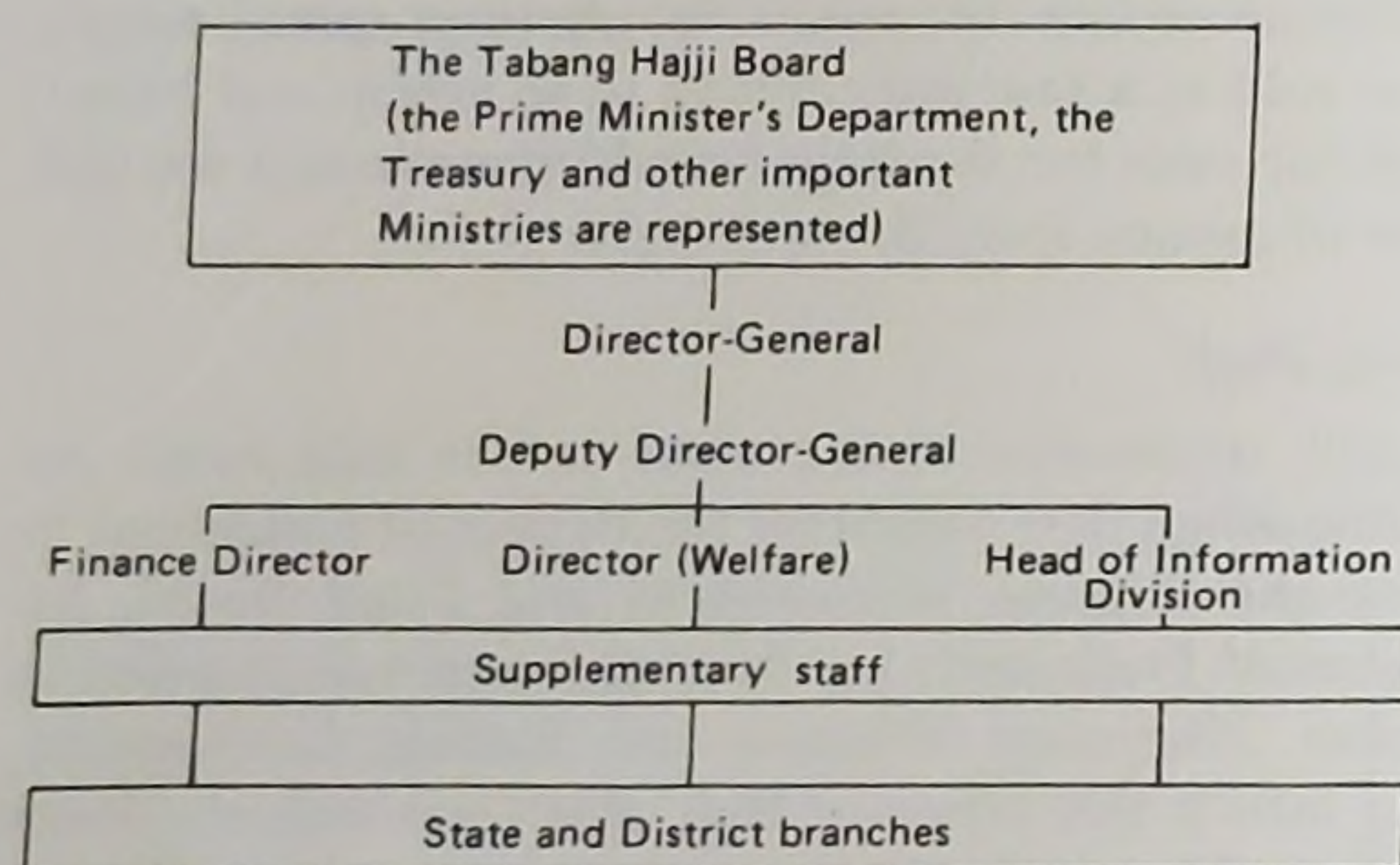
*Objectives:* The following are the objectives of the Corporation:

1. To enable Muslims to save for the Hajj or other purposes.
2. To enable Muslims, through their savings, to participate indirectly in investments in industries, commerce and real estates that are allowable under Islam.
3. To provide management, protection and assistance to the members performing the Hajj through the facilities and services of the corporation.

*The Structure:* The 'Lembaga Urusan dan Tabung Hajji' — the formal Malay name of the corporation — is directed by a board and managed by a Director-General as an executive head assisted by a deputy and other officials. In all the organisation has about 300 employees. Figure 5.2 is a simplified diagram showing its overall organisational structure.



Figure 5.2: The Organisation Structure of 'Tabang Hajji'



*Major Activities:* Activities of the Tabang Hajji may be divided into three broad categories, namely: (1) savings; (2) investments; (3) Hajj services. Any Muslims may open a savings account with the corporation provided they are citizens and enrolled as members of the corporation. Table 5.1 indicates the number of depositors during the 1969-74 period.

Table 5.1: Number of Tabang Hajji Depositions by Year During 1969-74

1969	48,082
1970	60,452
1971	73,264
1972	97,192
1973	125,194
1974	82,629

The total number of depositors as at 1 July 1976 was 266,723. The rate of membership growth is estimated to be at 5,000 persons per month. The amount deposited up to 1 July 1976 was M\$ 191.5 million\*. Out of this M\$ 140 million has been withdrawn by members either for purposes of Hajj or for other purposes such as purchasing a house, land, etc. So far the corporation has put in M\$ 68.5 million in various forms of investments. These are either in the form of shares or real estate or subsidising companies. The current market value of first stocks has been estimated at M\$ 100 million, which is envisaged to increase in value to M\$ 150 million by 1980. The pattern of investment of the corporation at October 1976 is shown in Table 5.2.

Table 5.2: Investments by Tabang Hajji

Shares	M\$ 66.3 million
Real Estate	M\$ 5.2 million
Total	M\$ 71.5 million

The Tabang Hajji has share holdings in more than fifty industrial ventures. To manage its 10,500-acre oil palm estate, the corporation created a subsidising company with an initial capital of M\$ 10 million. The estate yielded an income of M\$ 3 million in 1976.

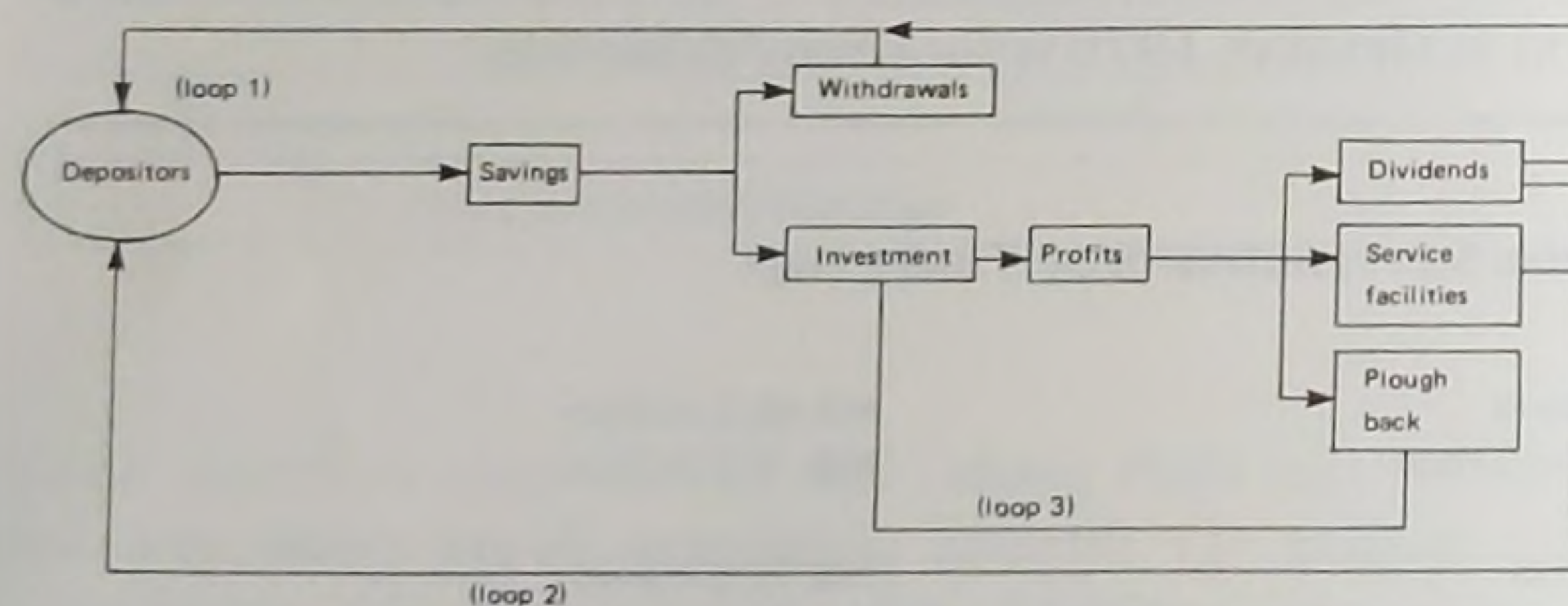
The corporation has purchased lands and buildings in various parts of Malaysia. The amount invested in this form totalled about M\$ 5 million. It has also purchased a building in Jeddah at a cost of about M\$ 1 million. In 1975, the income from the rental of its buildings came to about M\$ 400,000. The amount is expected to more than double in a few years' time. To provide more efficient travel services to its members performing the Hajj, the corporation has

\*Malaysian dollars.



established a non-profit-making transport subsidiary company with an initial capital of M\$ 500,000. The company provides travel facilities both by air and by sea. For the first time this year the company has concluded agreements with MAS, the Malaysian Airline, and SAUDIA, the Saudi Arabian Airline, for the transport of Malaysian pilgrims. Figure 5.3 below shows how the savings have been utilised for the benefit of the depositors as well as the corporation itself, which in turn improves the economy of the Muslims.

Figure 5.3: The Modus Operandi of Tabang Hajji



Utilisation of savings of members and the direct benefit to the members is shown in loops 1 and 2; the benefit of the corporation is illustrated by loop 3.

The income to the corporation through the various investment schemes has been encouraging. The rate of return has far exceeded the rate of interest it would have got from the bank under the fixed deposit schemes. The corporation takes a special pride in this for this proves that Islam's prohibition of *riba* is in no way a stumbling block to successful participation in the business world for Muslims. Part of the income is distributed to depositors in the form of dividends, ranging from 3 per cent in 1969 to about 7 per cent currently.

Although the Tabang Hajji plays a big role in investments, it is essentially a service organisation. The services it renders

to its members fall into the following categories:

- (1) banking;
- (2) transportation and visa;
- (3) information/education on Hajj;
- (4) accommodation;
- (5) medical and health care.

The most obvious service function of the corporation is to act as a banker to the members. When members decide to perform the Hajj, the corporation handles some of the money transactions on behalf of the members. It also handles visa requirements of the pilgrims. It arranges for transportation of pilgrims to the port of departure to and from Jeddah, Medina and Mecca. It liaises with the *mutawwafs* and helps in the allocation of pilgrims and its accommodation is available for rental to the pilgrims in Medina. In Mecca, the *Tabang Hajji* owns three buses, three ambulances and one van-cum-ambulance.

Lectures and information sessions giving information on Hajj are conducted for the benefit of the pilgrims. These are held at various local centres, during the few weeks preceding departure time for Mecca. Accommodation is arranged for the pilgrims at various points such as at port of departure in Malaysia, at Mecca and Medina. It accommodates pilgrims that have lost their way and therefore cannot return to the camps of their *mutawwafs*. These pilgrims are looked after until their respective *mutawwafs* have been found. This happens very frequently at Arafat and Muna. In difficult traffic situations in Muna, it is not uncommon for buses and taxis to simply leave the pilgrims at points convenient to the drivers. The Tabang Hajji plays host to these pilgrims while locating the camp sites of the *mutawwafs*.

The last, but in no way least, service offered by the Tabang Hajji is the medical one for the pilgrims. The medical mission was already in existence in 1952 prior to the formation of the Tabang Hajji. It was then under the Pilgrimage



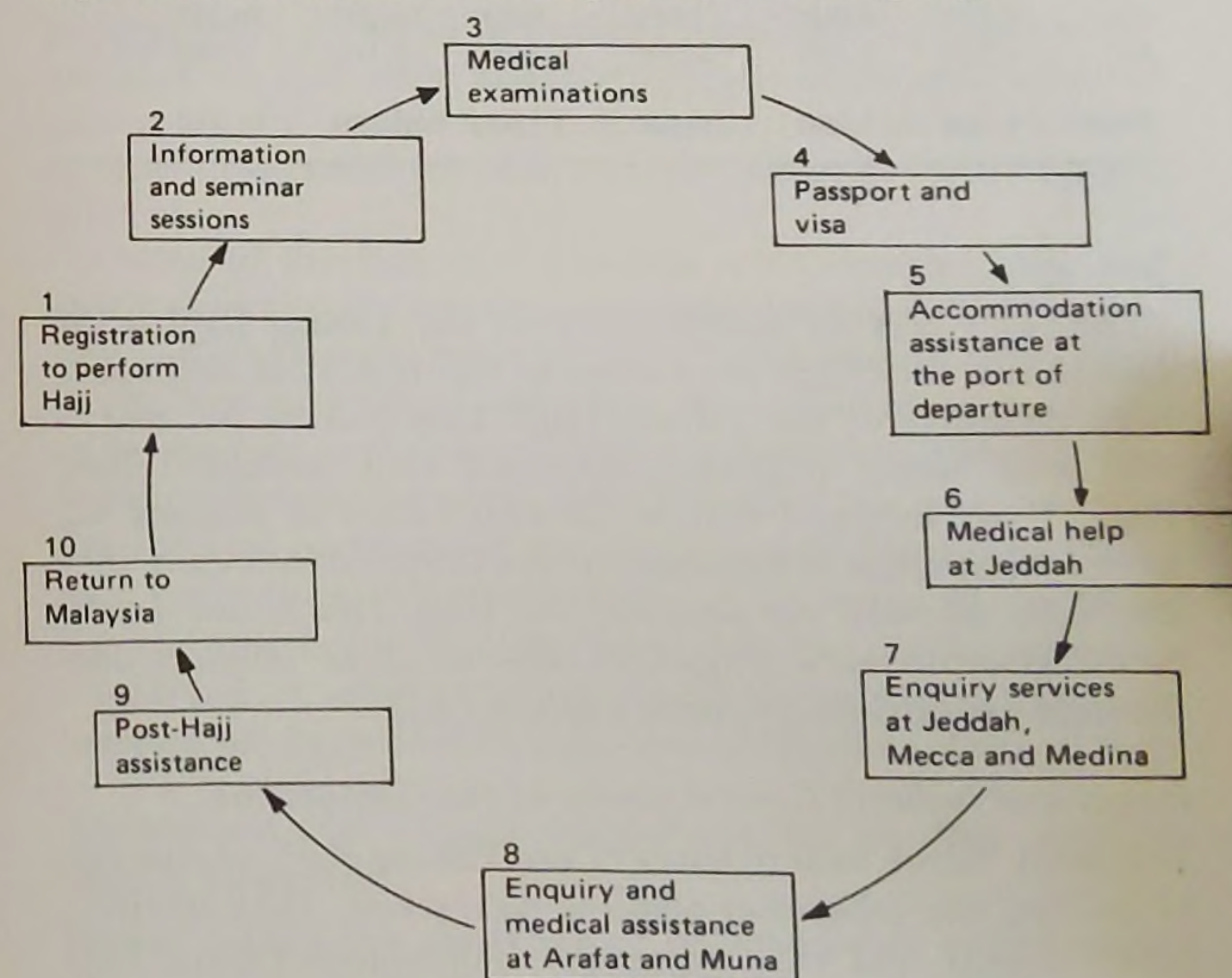
Control Board. When the Tabang Hajji was formed, the medical mission was placed under the Tabang Hajji by courtesy of the Ministry of Health, which lends its staff to the corporation for a period of three months or so. The work of the mission starts with a medical examination of the members of the Tabang Hajji applying to perform the Hajj. Members may not come to Mecca if they suffer from infectious diseases, insanity or if they should be at an advanced stage of pregnancy. The next stage of contact with the pilgrims is at Jeddah. The work begins with the arrival of the first group of pilgrims reaching *Madinatul-hujjaj*. With the departure of the pilgrims to Mecca or Medina, the medical mission breaks into three groups, one remaining in Jeddah, one going to Mecca, and the last one going to Medina. The three groups will combine again at Arafat and Muna. The whole mission then goes to Mecca before sending again another group to Jeddah to look after those in Jeddah prior to their departure for home.

Every year, almost every pilgrim seeks medical help. Last year, when there were about 16,000 pilgrims from Malaysia, the Mission treated about 30,000 cases. On the average, each pilgrim was seen and treated twice. It seems that on the average 5 per cent of the patients are non-Malaysian pilgrims. The mission started its own hospital in Mecca in 1959. But surgical cases and cases of infectious disease are still referred to the Saudi Government Hospitals. The mission hospital now has 50 beds. Attempts are being made to increase them to 70.

The mission for the 1395 Hajj consists of one senior medical doctor (as head of the mission), eight doctors, two of whom are lady doctors, a few hospital assistants, eighteen nurses, sixteen male and nine female attendants, three drivers, one laboratory assistant, four dispensers, two X-ray technicians and three cooks — a total of 76 persons. The doctor-patient ratio this year works out to be about 1:400. This very favourable ratio is due to an unexpected fall in the number of pilgrims this year. Usually the ratio is around 1:1,000.

While on secondment to the Tabang Hajji, the members of the Medical Mission are paid their normal salaries by the Ministry of Health, while the Tabang Hajji pays all necessary travel and accommodation fees as well as various allowances. The government contribution in terms of salaries and medicine is said to be around M\$ 1 million a year. Figure 5.4 shows a cycle of services provided by the Tabang Hajji to its member pilgrims.

Figure 5.4: Services Rendered to Pilgrims by the Tabang Hajji



That the concept of management of pilgrims through the Tabang Hajji has been well accepted is borne out by the following factors. First, as stated earlier, more and more Muslims become members and depositors of the Fund (see Table 5.1). Second, the number of pilgrims increases year by year, except for the 1975/6 season, when there was a drastic



fall in number due to general international recession, the 50 per cent increase in fees, and general confusion over arbitrary allocation of pilgrims to *mutawwafs* by the Saudi authorities. Table 5.3 gives figures of Malaysian pilgrims performing Hajj through Tabang Hajji.

Table 5.3: Number of Malaysian Pilgrims performing the Hajj through Tabang Hajji During 1970-6 Period by Method of Travel

	1970	1971	1972	1973	1974	1975
Sea	8,571	9,069	7,615	9,691	10,207	10,237
Air	1,131	1,581	2,780	3,292	5,159	5,498
Total	9,702	10,650	10,395	12,983	15,366	15,735

Another test of acceptability of the Tabang Hajji is the fact that a very high percentage of the Malaysian Hajjis have been members of the Tabang Hajji. Last year 90 per cent of the total Malay pilgrims performed Hajj through Tabang Hajji. It is envisaged that in the near future all pilgrims will have to first enrol as members of the Corporation before they could be allowed to perform the Hajj. This is due to the Saudi government's proposed plan to allow pilgrims only through national government's sponsorship.

#### *Direct and Indirect Contributions of the Corporation*

The most direct beneficiaries of the Tabang Hajji scheme are, of course, the subscriber-pilgrims themselves. They receive a yearly bonus and they enjoy the Hajj-related Tabang Hajji services and facilities. However, through its various investment schemes, the Tabang Hajji has brought about other benefits to the Muslims of Malaysia as a whole. First, it has helped to increase Muslim property (real estate) ownership in Malaysia. Second, through its acquisition of properties, it provides employment to more Muslims in the country. These two further contribute to the fulfilment of the aspiration of

the late Prime Minister of Malaysia who said, 'I hope we will continue to strive to rebuild a strong economic position among the Islamic communities of this country.' These, incidentally, also contribute to the realisation of the New Economic Policy of Malaysia, the two-pronged strategies of which are the eradication of poverty and the restructuring of society. Finally, the corporation has enhanced tremendously a sense of unity and purpose among the Muslims of Malaysia.

#### *The Future*

Judging from the trend in its brief past, the corporation will continue to play more effective roles as an Islamic agent of change. It will be able to provide greater and more efficient services to its members so as to make life much easier for the pilgrims.

Owing to the fact that it is still at a formative stage and that its services are meeting increasing demands, the corporation is facing development at a very rapid rate. In order for it not to lose its sense of direction, the corporation must now or in the very near future initiate evaluations of its policies, implementations and strategies. The time has also come for the corporation to set up its own research division. Without such evaluations the effectiveness of its mode of operation may be displaced by goals generated by purely economic motivation. A sense of balance must be preserved, especially between profit-motivated and service-oriented schemes.

#### *Implications for Greater Collaboration on Hajj Between Muslim Countries*

Before ending this short paper on Malaysia's experience in management of pilgrimage of its people, I would like to raise the following questions:

1. Is there a case for each Muslim country to set up its own Hajj management corporation?
2. If there is, what should be the model to adopt?
3. Is there a case for a larger corporation to be set up to



which all country corporations should subscribe?

4. If there is, what should be the model of such a super-corporation?

If answers to questions 1 and 3 are in the affirmative, then there is a need for us to initiate studies in the following areas:

- (a) survey existing Hajj management agencies in various Muslim countries;
- (b) work out common features of these agencies;
- (c) find out common problems faced by these agencies when managing their respective pilgrims in Jeddah, Mecca, Arafat, Muna and Medina;
- (d) work out solutions to these problems on the basis of collaborative efforts of these agencies.

One other area of investigation should centre around the question: Is the Malaysian model of Hajj management applicable to other Muslim countries? And, if the answer is in the affirmative, then is it possible for us to repeat the model in other Muslim countries? Furthermore, can we combine local Hajj management organisations in an international Hajj corporation?

My own view is that the establishment of a super-Hajj body (or corporation) is not just feasible and desirable but also timely. Such a body will be useful for three reasons: to maximise efficiency in human management of pilgrims in their home country, to foster economic collaboration between and among Muslim countries and to foster and strengthen Muslim brotherhood and Muslim unity. After all, the Hajj is all about brotherhood and unity.

Adil A Bushnak

And proclaim the Pilgrimage among men: they will come to thee on foot and (mounted) on every kind of camel, lean on account of journeys through deep and distant mountain highways  
(The Qur'an 22.27).

### *Introduction*

The Hajj (pilgrimage) implies movement and travel. However, no study has been done addressing itself to the transportation needs of such a major event. The objective of this study is to review the contemporary transportation system of the Hajj, to propose some guidelines to improve the system, and to outline the areas of needed research. It is worth noting that the word transportation here includes the activities of movements in the Holy areas which are part of the rites of Hajj. The purpose of discussing such a topic in a conference of Muslim scientists and engineers is to draw their attention to the sciences of urban technology (transportation, housing, urban planning, etc.), since these sciences are usually based on normative assumptions, some of which may not be applicable to Muslim societies.

This paper will divide the Hajj transportation system (HTS) into international, regional and local subsystems discussing the interaction among them and the major elements of each. Some objectives and criteria for HTS will be suggested leading to guidelines or approaches to possible solutions. The interdependence between transportation and other elements of the Hajj will be stressed as a characteristic of special event systems. Areas of future research most relevant to the problem of the Hajj will be discussed, particularly the field of modeling human crowd motion.



*Existing Conditions*

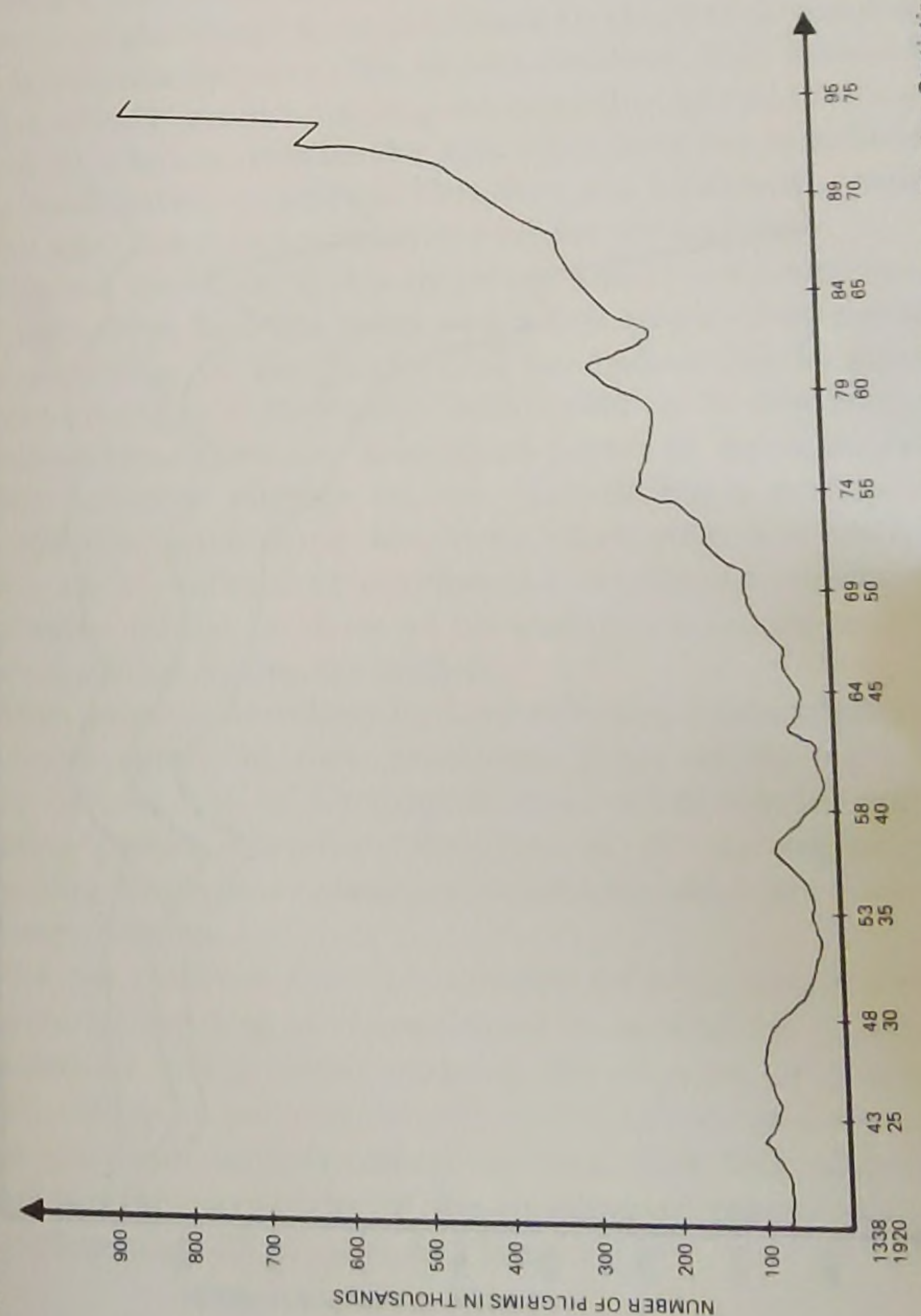
*The International Subsystem* The demand for Hajj travel has been increasing at a great rate in recent years, mainly due to the increase in the number of pilgrims from outside Saudi Arabia (see Figure 6.1). This increase in demand can be attributed in part to improvement in means of transportation. The demand is expected to continue to increase in the future as an increasing number of Muslims find themselves able to afford the journey to Mecca. Countries are free to decide on the number of pilgrims they can send, based on their internal economical or political policies. However, the actual number of their pilgrims usually far exceeds these limits because many arrive unofficially as individuals, and generally from countries other than their original country. The policy of the Saudi Government is to accept anyone requesting entry for Hajj.

Hajj organisations and services in Muslim countries are mostly traditional and ineffective. There are usually no rules to regulate or control Hajj services, and where they do exist they are not enforced. Local Hajj travel agents usually have a free hand regarding the nature and quality of their services with minimum interference from their governments.

The one exception to this rule in recent years has been Iran. The Iranian government has an effective system to organise and control its pilgrims. The services of each of its local agents are constantly inspected by the government, which also sets standards for all services ranging from transportation to food and accommodation through the entire journey and duration of the Hajj.

Most of the international pilgrims in recent years travel by air (See Figure 6.2), using special chartered flights (only 5 per cent of air pilgrims arrived on regular flights in the 1974 season). This trend is expected to continue as the cost of air travel is reduced in comparison with other modes of transportation. The increasing percentage of pilgrims travelling by air has increased the sharpness of arrival and depar-

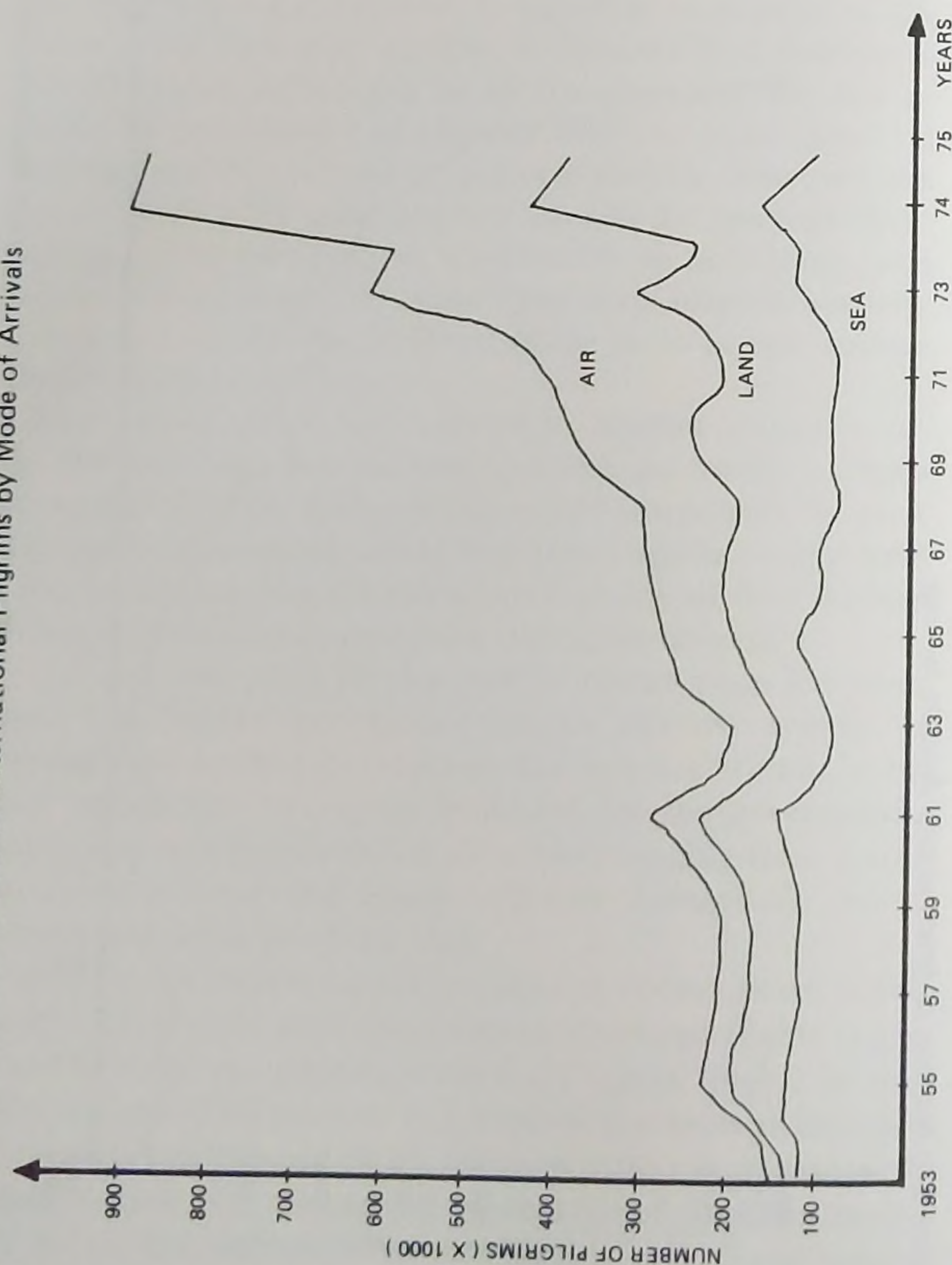
Figure 6.1: Number of International Arrivals for Hajj



Source: Kingdom of Saudi Arabia, Ministry of Interior, Passports and Nationality Department, Pilgrims Statistics.



Figure 6.2: Cumulative Number of International Pilgrims by Mode of Arrivals



Source: Kingdom of Saudi Arabia, Ministry of Interior, Passport and Nationality Department, *Pilgrim Statistics*.

ture peaks on the regional level, and reduced the annual variations in the number of foreign pilgrims because air transportation systems are less sensitive to international politics and border crises. The Saudi airline has a share in the revenues and services relating to air pilgrims according to bilateral agreements between the Saudi government and other countries. The route and carrier of pilgrims from the same country might change from one season to the next depending on agreements between the airlines involved. The national airline of each country, lacking the capability of transporting all of its pilgrims, solicits the best offer from other airlines or a combination of airlines. This does not necessarily result in the most direct or convenient route for the pilgrims.

Pilgrims travelling by sea in recent years have been coming only from Red Sea ports and a few south Asian ports. The reopening of the Suez Canal has revived the Mediterranean routes, but the traffic is expected to be low in the coming years. There are four travel agents in Saudi Arabia which transport pilgrims by sea, each having a monopoly on specific Asian ports but they share Red Sea traffic. There are no national or international regulations relating to sea traffic similar to those of air traffic due mainly to lack of competition among the carriers.

Most pilgrims travelling by land arrive on buses chartered by local agents in their countries. Some of the vehicles they use are not fit for long distance travel nor for transporting people. However, there are as yet no regulations regarding the type or condition of vehicles which are allowed to carry pilgrims.

We can conclude that the international transportation subsystem of the Hajj is characterised in general by a lack of regulations and control regarding the number of pilgrims, their ability to perform or afford the journey and the type and quality of services offered to them. This lack of control increases the complexity of the problem on the regional and local levels, as will be discussed later.



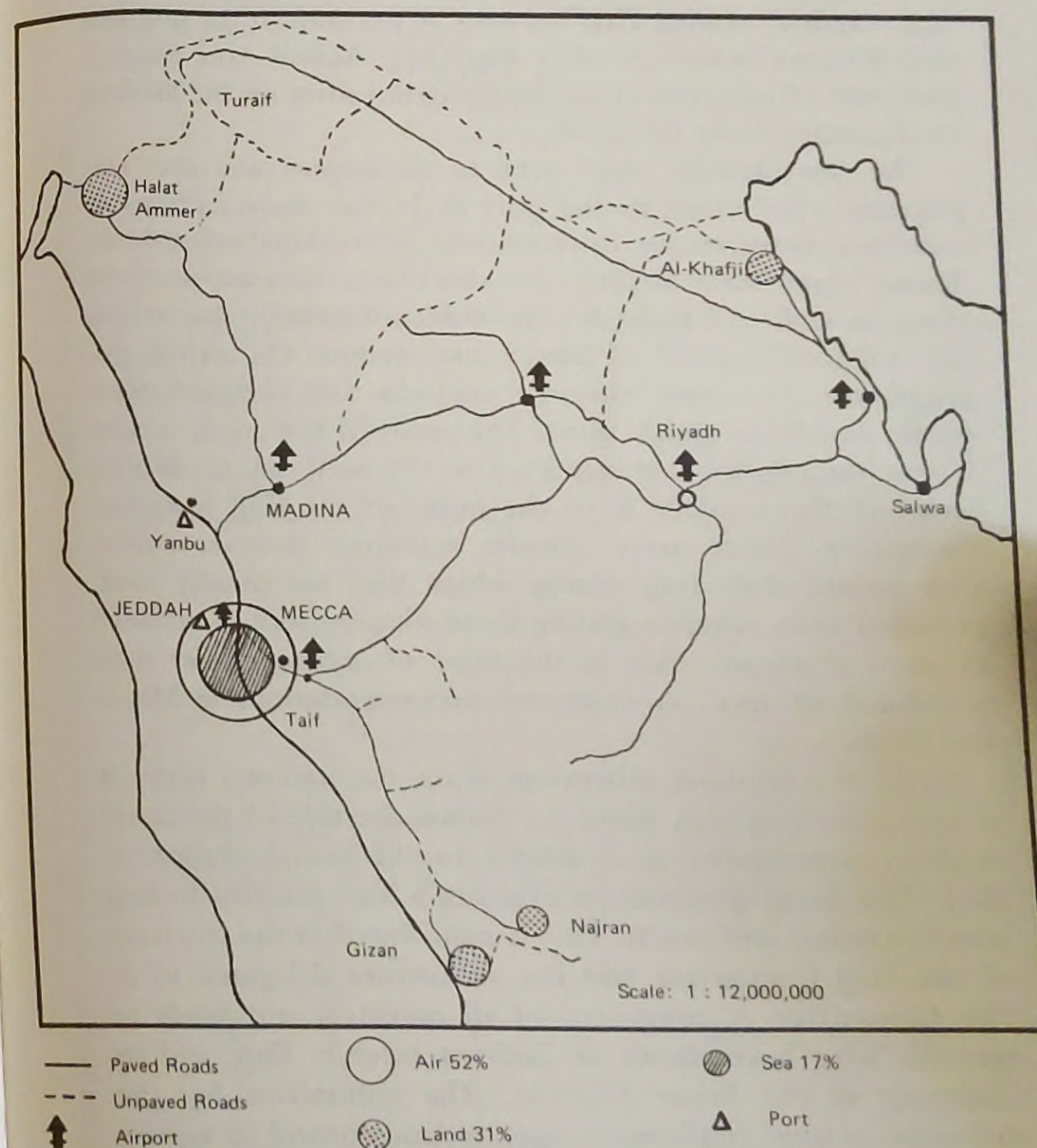
*The Regional Subsystem* This subsystem includes the elements related to the transportation of pilgrims from entry points in Saudi Arabia to the region of Mecca and inside that region among Mecca, Medina, and Jeddah.

Jeddah airport is the largest single entry point of foreign pilgrims, receiving about 50 per cent of them. The use of jumbo jets has helped to increase the capacity of the airport, using existing facilities. The total number of operations (departure and landings) reached 404 during 24 hours at the peak of 1974-5 Hajj season. There are two parallel runways which cannot be used simultaneously because their separation is less than that required for safety. Only procedural flight control is available but modern navigation aids are being installed and will be operating in the near future. A new airport is under construction north of Jeddah, with a separate Hajj terminal.

Jeddah port has one pier for passenger ships which can accommodate up to six medium sized vessels. Ships used for Hajj traffic transport on the average between 1,000 and 3,000 pilgrims. Sea pilgrims start arriving three months before Hajj and their departure continues up to three months afterwards. Considering both air and sea pilgrims, Jeddah is the terminal point for over 70 per cent of foreign pilgrims (see Figure 6.3). Madina airport receives less than five-tenths per cent of air pilgrims and plays an insignificant role on the regional level because only about 5 per cent of those arriving in Jeddah can be transported by air to Medina. Taif airport, while at an equal distance from Mecca as Jeddah airport, plays no role during the Hajj at present, and there are as yet no plans to use it to relieve the congestion at Jeddah. The port of Yanbu, about 200 kilometres from Madina, has been used to receive some pilgrims in the past and there are plans to use it for this purpose in the future.

The national road network has improved in recent years and traditional Hajj routes to Jordan, Iraq, and Yemen are already paved or under construction (See Figure 6.3). The regional network consists mainly of a four-lane, un-

Figure 6.3: Relative Volume of International Arrivals by Mode and Point of Entry Average over 1967-1975



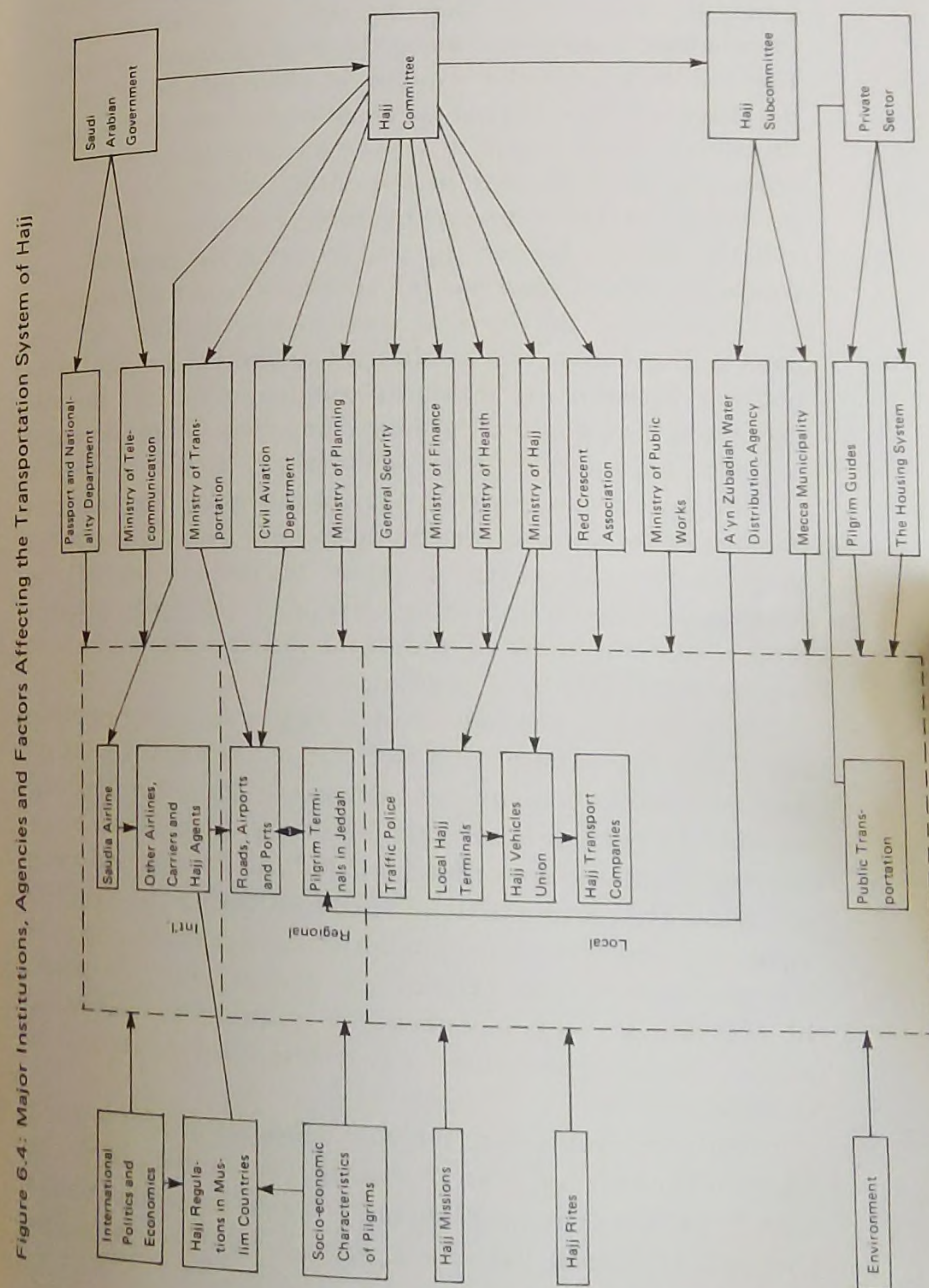
Source: Kingdom of Saudi Arabia, Ministry of Interior, Passport and Nationality Department, *Pilgrims Statistics*.



divided highway between Jeddah and Mecca 70 kilometres long, and a two-lane highway between Jeddah and Medina 420 kilometres long. Plans to construct a freeway between Jeddah and Mecca are underway. The Medina road operates near capacity during Hajj because 90 per cent of the pilgrims visit Medina before or after Hajj (Hajj Action Area Study), and over 10 per cent of the land pilgrims drive on the Medina road coming from the north.

The 'air-pilgrims' city' next to the airport and the 'sea-pilgrims' city' close to the port in Jeddah serve as transfer terminals between the international and regional subsystems. These 'cities' have facilities for short-term mass accommodations as well as offices for the *Wukala* (agents) representing the 'pilgrims' guides' of Mecca and Medina. On arrival, pilgrims are processed through customs and assigned their guides in Mecca and Medina. The agent of the guide sees to it that the pilgrim is transported to the holy city he desires. Most of the transfer is to the buses of the Hajj transport companies. These same transfer terminals serve as collection points after Hajj during which they are usually overcrowded with pilgrims getting there illegally well in advance of their departure date in the hope of leaving earlier than scheduled to save on expensive accommodations in Mecca and Medina.

Since the regional subsystem is on the national scale, it is appropriate at this point to discuss the role of the Saudi Arabian government as it relates to the transportation of Hajj. The Saudi government attaches a high priority to Hajj administration and needs. This is manifested in the structure of the Hajj Committee and the authorities delegated to it. The Committee is composed of all ministers and heads of agencies who have direct or indirect roles in Hajj, and its Chairman is the Prime Minister. The committee has the authority to plan, implement, operate, and control all aspects of Hajj. Figure 6.4 indicates the interaction between the Hajj Committee and the major elements of the transportation system.



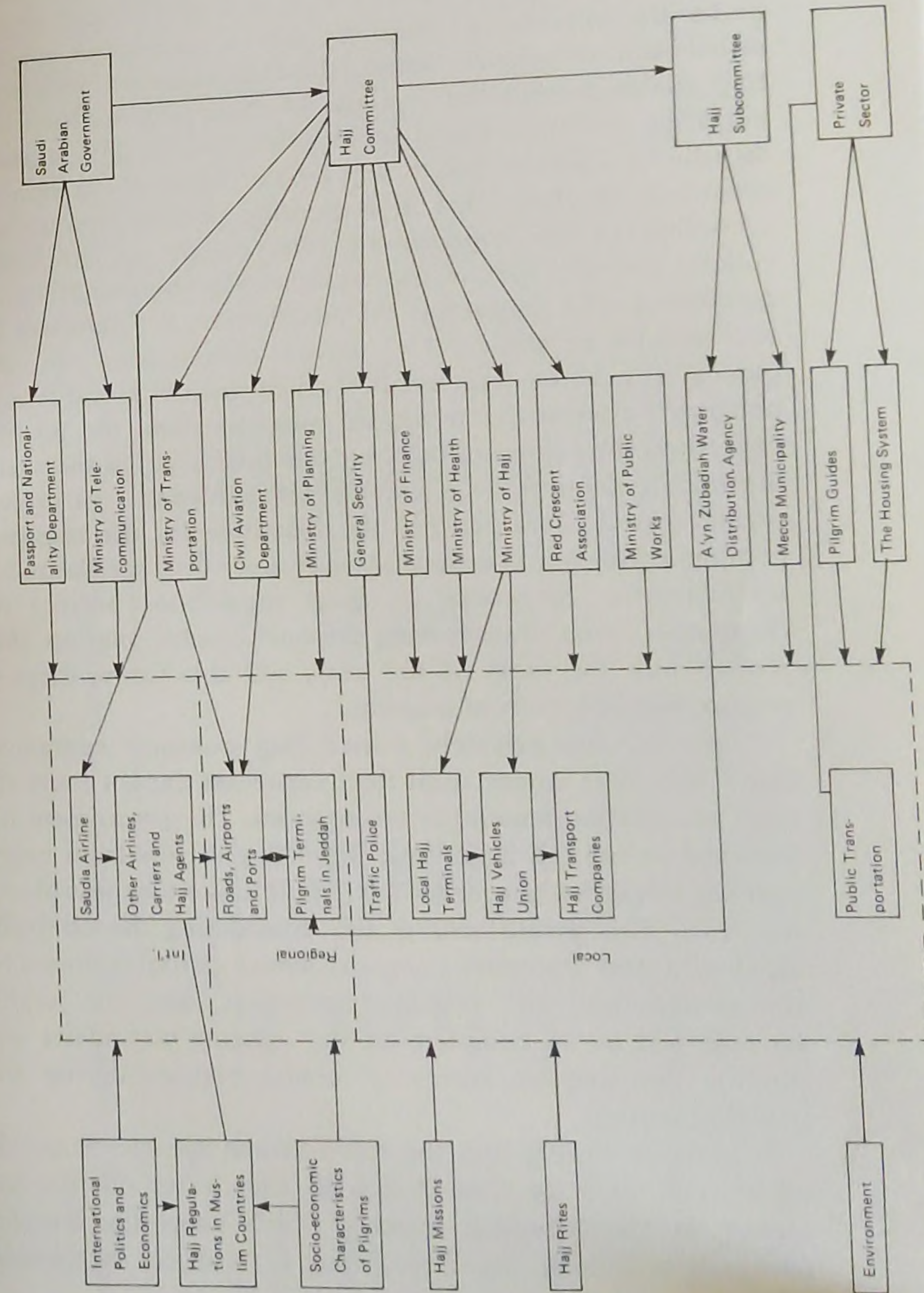


divided highway between Jeddah and Mecca 70 kilometres long, and a two-lane highway between Jeddah and Medina 420 kilometres long. Plans to construct a freeway between Jeddah and Mecca are underway. The Medina road operates near capacity during Hajj because 90 per cent of the pilgrims visit Medina before or after Hajj (Hajj Action Area Study), and over 10 per cent of the land pilgrims drive on the Medina road coming from the north.

The 'air-pilgrims' city' next to the airport and the 'sea-pilgrims' city' close to the port in Jeddah serve as transfer terminals between the international and regional subsystems. These 'cities' have facilities for short-term mass accommodations as well as offices for the *Wukala* (agents) representing the 'pilgrims' guides' of Mecca and Medina. On arrival, pilgrims are processed through customs and assigned their guides in Mecca and Medina. The agent of the guide sees to it that the pilgrim is transported to the holy city he desires. Most of the transfer is to the buses of the Hajj transport companies. These same transfer terminals serve as collection points after Hajj during which they are usually overcrowded with pilgrims getting there illegally well in advance of their departure date in the hope of leaving earlier than scheduled to save on expensive accommodations in Mecca and Medina.

Since the regional subsystem is on the national scale, it is appropriate at this point to discuss the role of the Saudi Arabian government as it relates to the transportation of Hajj. The Saudi government attaches a high priority to Hajj administration and needs. This is manifested in the structure of the Hajj Committee and the authorities delegated to it. The Committee is composed of all ministers and heads of agencies who have direct or indirect roles in Hajj, and its Chairman is the Prime Minister. The committee has the authority to plan, implement, operate, and control all aspects of Hajj. Figure 6.4 indicates the interaction between the Hajj Committee and the major elements of the transportation system.

Figure 6.4: Major Institutions, Agencies and Factors Affecting the Transportation System of Hajj





The agency which is set up exclusively for Hajj transportation is the 'Hajj Vehicles Union'. This is a government agency under the Ministry of Hajj. Its role is to control the fair distribution of pilgrims among the Hajj transport companies. Hajj guides present the requests of their pilgrims for transportation on the regional or local level to the Union which distributes these requests among the transport companies according to their turn in a rotating priority system and according to the capacity of each company. The Union collects the fees for the trip and channels the money to the companies. The Union has the authority to set standards for the vehicles or the level of service desired from the companies. The Union was established to prevent harmful competition between the transport companies and the possible exploitation of pilgrims by these companies. It has succeeded in these objectives to a great extent. However, its present regulations do not provide the incentive for the transport companies to improve their services since they are assured of their income. Moreover, as these regulations prevent the companies from transporting anyone besides pilgrims they remain idle for most of the year, and this forces them to require higher fees from pilgrims.

There are five privately owned Hajj transport companies (see Table 6.1) whose total fleet capacities cannot meet the large increase in demand in recent years. The government has resorted to renting buses and importing drivers from neighbouring countries. An order for 2,000 new buses was placed in 1975. The government is also considering the establishment of a new transport company whose capital is shared by the government, the existing companies, and the public. Its role will be to complement the existing companies and provide for regular inter-city transportation during the non-Hajj season.

It is worth noting that the role of some agencies is mostly traditional, such as A'yn Zubaidah (the water distribution agency in Mecca-Jeddah region), which owns the transfer terminals in Jeddah. Moreover, there is no direct interaction

Table 6.1: Hajj Transport Companies and their Fleet Capacity (1974)

Name of Company	Sedans		Buses		Open-topped Buses	
	Vehicles	Seats	Vehicles	Seats	Vehicles	Seats
al-Maghrabi	191	1,209	219	8,864	165	7,256
al-Tawhid	623	3,213	198	8,420	111	4,884
al-Tawfiq	528	2,976	614	25,948	250	10,600
al-Arabia	866	4,726	605	25,292	490	21,512
al-Ka'aki	342	2,006	153	7,240	152	7,196
TOTAL	2,550	14,130	1,789	75,764	1,168	51,448

Source: Motor Vehicle Union Records.

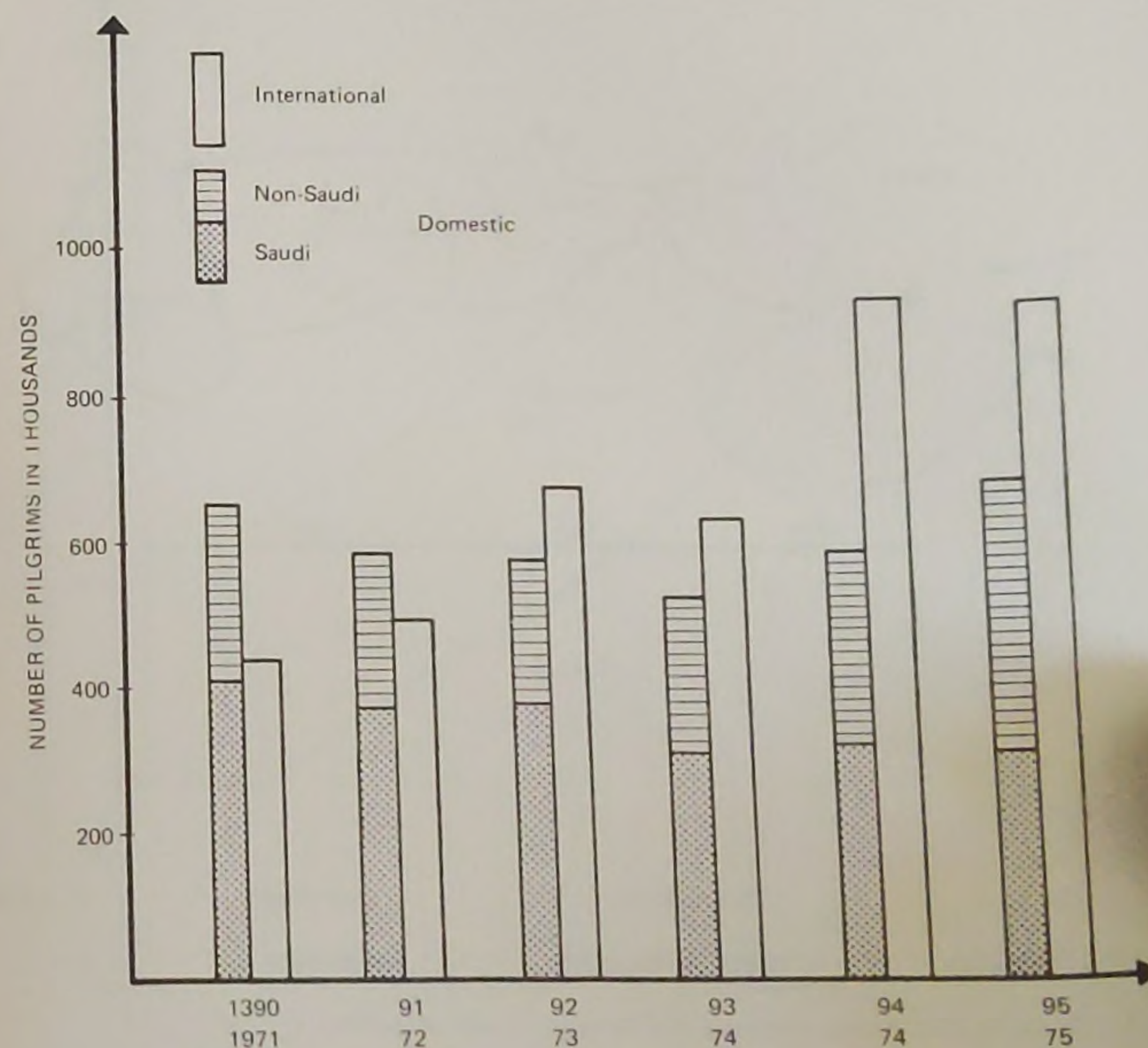


between the items listed on the left side and those on the right side of Figure 6.4. The role of the Saudi government is not limited to that of the Hajj Committee because every agency or institution in the country is affected or is affecting the Hajj in some way. The whole country is literally drafted to provide for Hajj services during the Hajj season. The number of pilgrims from Saudi Arabia has remained almost constant in recent years (see Figure 6.5) and a large percentage of these are non-Saudis working in Saudi Arabia.

*The Local Subsystem* This subsystem includes the elements related to the local movements among Mecca, Muna, and Arafat. The major Hajj rites and related movements are indicated in Figure 6.6. The main traffic problem before entering Arafat is related to the collection of pilgrims using large buses which block the narrow streets of Mecca. Formerly, the departure from Arafat was a major problem, which has now largely been solved by the construction of numerous bridges for vehicles and pedestrians across the Arnah valley. The departure from Muzdalifah and the entry to Muna remain to be major traffic problems due to the convergence of all pilgrims and vehicles on a small area, lack of access control, and lack of full separation between vehicles and pedestrians. The major movements during the following three days are crowd movements at the Jamarat area in Muna and inside the Sacred Mosque (*Haram*) in Mecca. The construction of a pedestrian bridge over the Hamarat area will reduce the crowd density by distributing it over two levels. However, the possibility remains of people being crushed in the crowd around convergence points. Traffic remains congested inside Muna and Mecca all through Hajj due to the limitation of physical space by mountains and the unconstrained use of vehicles which have to share the same space with pedestrians.

The use of private cars relative to other vehicles has been increasing in recent years as shown in Figure 6.7. It is important to note that passenger cars carry less than 10 per cent of

Figure 6.5: Number of Domestic and International Pilgrims

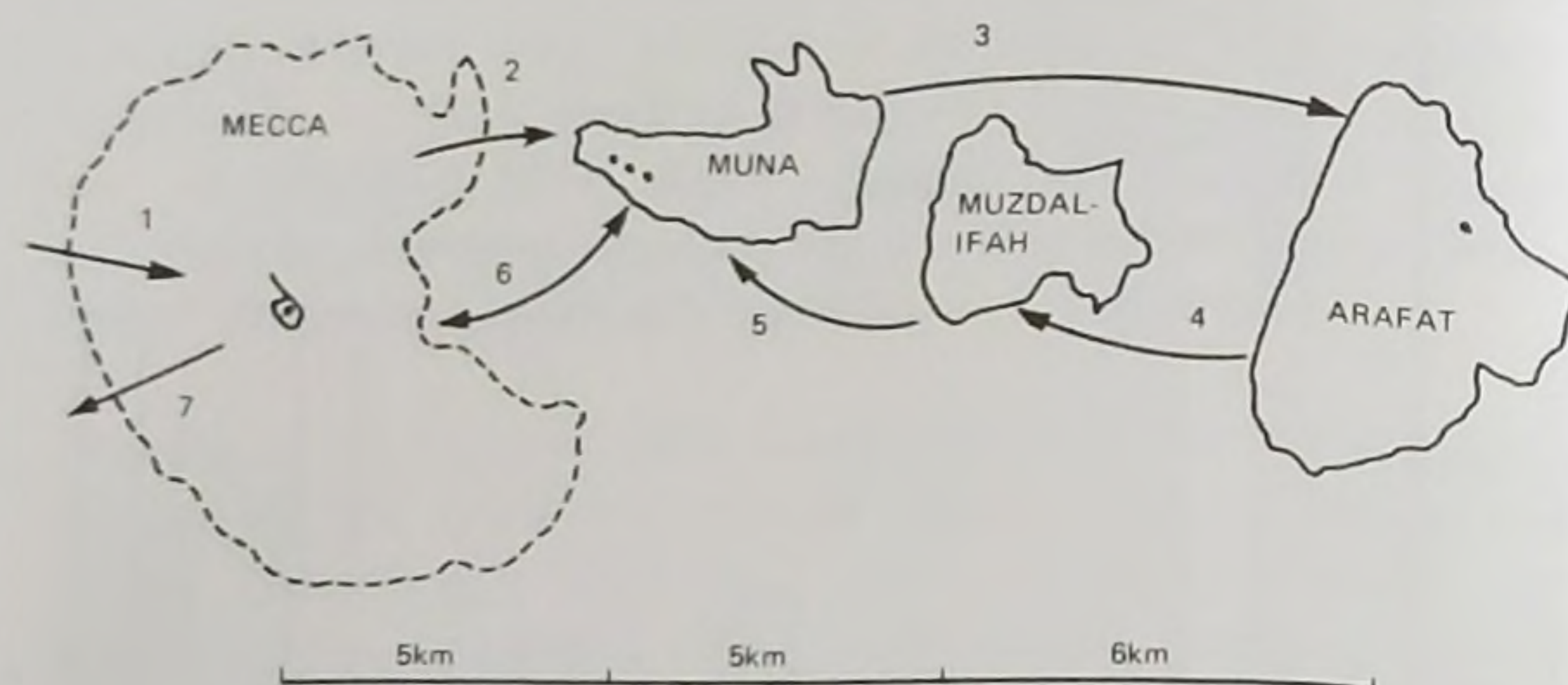


Source: Kingdom of Saudi Arabia, Ministry of Finance, General Statistics Department, *Ihsa'at Al-Hajj*.

the total number of pilgrims, while buses carry over 50 per cent of them to Arafat. In returning from Arafat, buses cannot take more than one or two round trips and walking becomes the major mode of movement. Walking has been greatly facilitated recently between Arafat and Muna by the construction of two walkways which have been fully used by pilgrims. These walkways remain to be grade separated at all intersections and extended to the Haram Mosque.

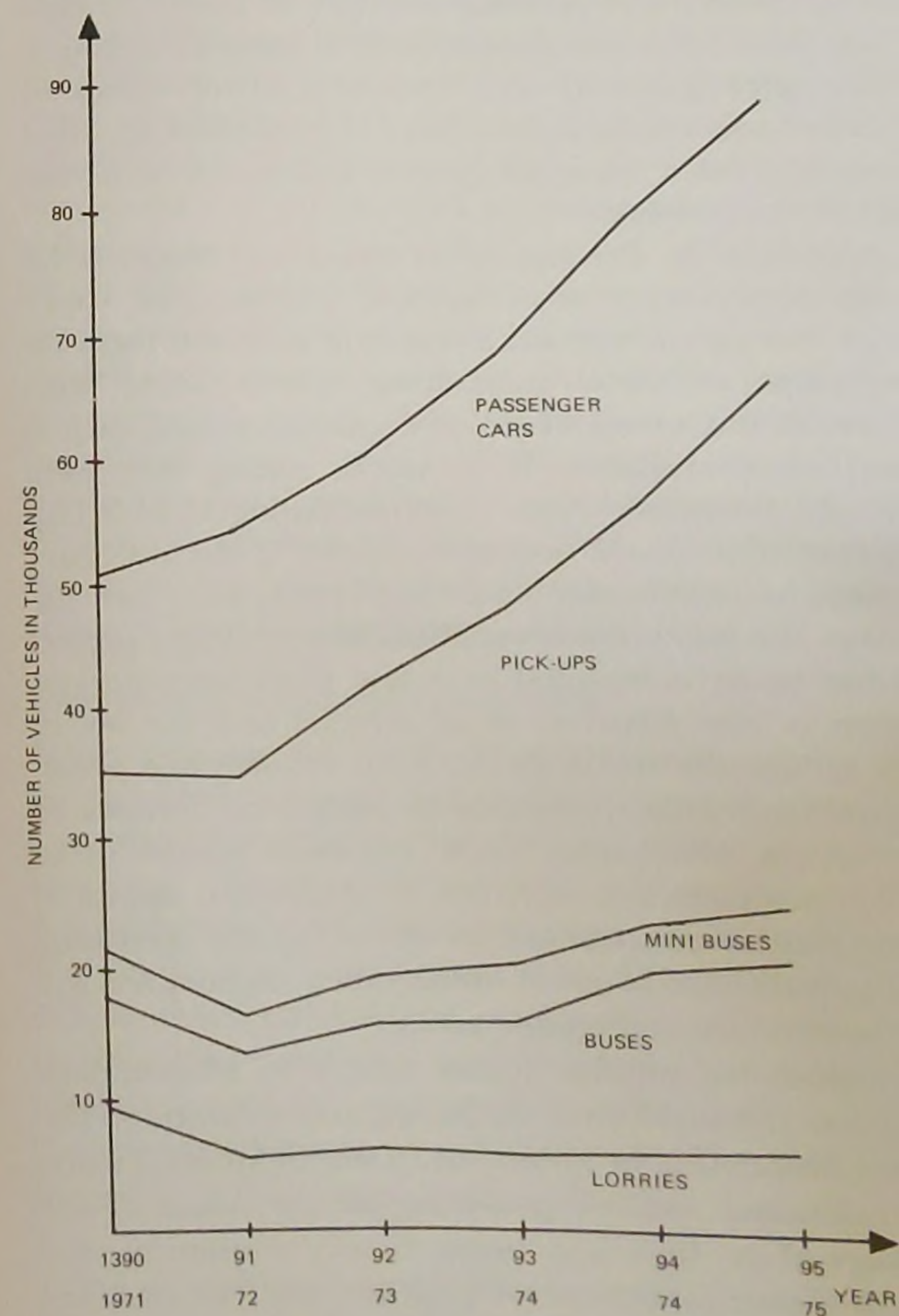


Figure 6.6: Summary of Major Hajj Rites



	Three Days	One Night	One Day
Dhu Al Hijjah	10th, 11th, 12th	9th/10th	9th
1. Donning the Ihram, entering the Haram, Tawaf of arrival.			
2. Going to Muna on the eighth of Dhu Al Hijjah and spending the night there.			
3. Being in Arafat on the ninth, leaving after sunset.			
4. Praying at Muzdalifah, spending the night of the tenth there.			
5. Returning to Muna on the tenth to stone the largest of the three pillars symbolising Satan (Jamarat), doffing the Ihram and sacrificing an animal.			
6. Making the Tawaf and Sa'y in Mecca, returning to Muna to spend the nights of the eleventh, twelfth and thirteenth (if possible) and to stone the three pillars of Jamarat each day.			
7. Tawaf of departure from Mecca.			

Figure 6.7: Cumulative Number and Type of Vehicles in Hajj



Source: Kingdom of Saudi Arabia, Ministry of Finance, General Statistics Department, *Ihsa' at Al-Hajj*.



Traffic control has greatly improved in recent years primarily due to the devotion and personal sacrifice of traffic officials and the use of modern equipment such as radio communications, helicopter control, and remote control television cameras. The local traffic police force is reinforced by thousands of police units, national guards, and boy scouts from every part of the country.

The congestion in the streets of Muna and Mecca is increased by unnecessary trips because pilgrims can easily be lost in a tent city where all streets look alike and there are no signs, maps or street numbering system. Many trips could be avoided if other means of communications, such as telephones, were available. It is worth noting that there were only 25 telephone lines in Muna during 1974-5 Hajj season. Other trips could be made shorter if the necessary services, such as health care and food stores, were well distributed over the inhabited area. Muna improvement project which is due to be completed in a few years, incorporates the concepts of the distribution of services and the use of tunnels to reduce the travel distance for vehicles and pedestrians. However, it fails to provide an integrated network of walkways or an alternative form of mass transit other than buses. An extensive network of highways, skyways, and bridges will be constructed to allow for the increasing number of private cars to enter Muna valley. Helicopters will be used to provide for emergency access.

The institution of pilgrim guides relates to all functions of the Hajj on the local level, including transportation. The guide (called *Mutawwaf* in Mecca and *Dalil* in Medina) maintains his traditional role of providing all the needs of the pilgrims assigned to him and being totally responsible for them. The increasing number of pilgrims and the inability of most guides to cope with the new demands and conditions have resulted in the failure of the traditional system to provide the required services. Many improvements of this system are under study by the Saudi government and it can be said that the guide system is in a transitional period.

One of the best improvements proposed changes the role of the traditional guide. Instead of dealing with each individual pilgrim, he would deal with the leaders of groups or units of pilgrims. Each unit would be composed of perhaps 100 pilgrims. The leader of the unit would be completely responsible for the services provided for his unit, including transportation. He leads the unit all through the journey of the Hajj. These leaders should be well trained and religiously educated and motivated. Since thousands of them are needed, they must come from all - Muslim countries. Hence, during the off-season, they would go back to their countries to educate, plan, and co-ordinate for the following Hajj season. A special organisation could be set up to inspect and control the services of these leaders. Such a vertical organisation of the system of guides has already proved to be effective from the experience of Iran.

#### *Objectives, Criteria and Constraints*

After defining the Hajj transportation systems (HTS) in the previous section, and before suggesting any solutions for existing problems, we need to define the goals, objectives, and criteria to be used in evaluating and measuring the performance of suggested improvements. Since the Hajj is a unique event, we expect that HTS will have a goal with unique characteristics not common to other transportation systems. Once the goal is defined, we can develop a set of objectives, criteria, and possibly subcriteria to evaluate the degree of achievement of the goal. The goal of HTS, as suggested in this paper, is the following:

To provide safe and efficient transportation for pilgrims such that the religious, social, economical, and political functions of the Hajj are fulfilled.

The word efficient is used here as a broad term to mean the achievement of the goal with optimum use of available resources. The above definition of the goal recognises all the



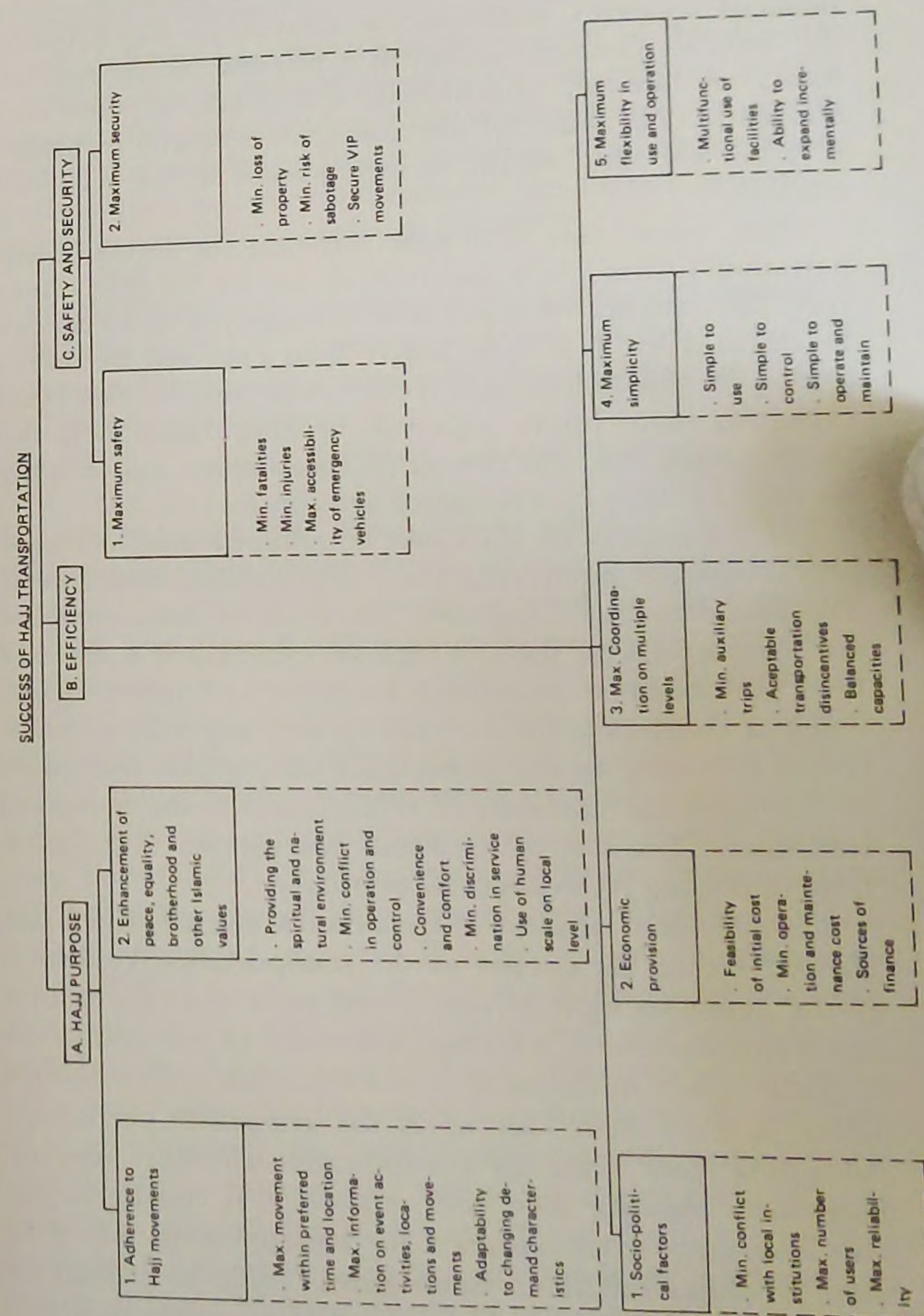
purposes of the Hajj, the basic one of which is the religious one. The transportation system (and all other systems of the Hajj) must not only provide for religious activities and requirements but must also enhance the spiritual atmosphere of the occasion. This can be implemented by having the system enforcing, at least not conflicting, with the moral values of Islam as stressed in the Hajj, such as peace, equality and brotherhood. For example, the system should be designed with minimum discrimination in the services provided for pilgrims, to stress the principle of equality and the operation and control of the system should involve minimum human conflict, to stress the principle of peace. It is worth noting that the functions of the Hajj constitute constraints as well as objectives. The socio-economic characteristics of pilgrims are a major constraint in HTS. The difficulty of controlling the total number of pilgrims, on the political level, must be solved within the transportation system by maintaining some level of impedance as will be discussed later.

The uniqueness of HTS is manifested in the definition of its goal. The usual goal of typical transportation systems is to maximise the accessibility to all urban areas and to increase the mobility of individuals. But the objectives of accessibility and mobility *per se* are undesirable in HTS since they result in unnecessary movements. The goal of HTS is to provide for the *required* movements and to *discourage* movements unrelated to the functions of the Hajj.

The objectives and sub-objectives proposed for HTS are listed in Figure 6.8. This list is not exhaustive and its elements are not mutually exclusive. Since many objectives are conflicting elements, the use of multi-attribute utility functions is suggested. A survey among pilgrims and officials related to Hajj should provide enough background to construct the utility equations for each level of details.

It is worth noting that regular economic analysis and cost effectiveness methods should be used with due consideration for the short duration, unique characteristics,

Figure 6.8: Hierarchy of Major Goals, Objectives and Sub-objectives of Hajj Transportation.





and high utility assigned to the success of the event. While financial resources might not be limited for Hajj projects, the natural resources (manpower, physical space, environment) are severely constrained, and should be used very efficiently. The waste of any resources is strictly forbidden in Islam and this should be incorporated in the economic analysis.

While travel time is a basic criterion for regular transportation systems, it is not critical, *per se*, for HTS. However, the variance of travel time is suggested as a criterion for HTS. Trips that take longer than expected become a source of discomfort and if they take shorter time than expected, more future trips will be encouraged. It is also worth noting that the criteria of accessibility and mobility are desirable only for emergency and control officials.

The constraints of HTS can be grouped into four categories: environmental, religious, functional, and institutional. The environmental constraints are those of the mountains, the narrow valleys, the hot climate, etc. Hajj is a series of rites performed at prescribed locations and times. Hence, religious constraints involve time, space, and a set of preferences according to the individual's beliefs. The limitations of the users and operators of HTS constitute the functional constraints. The role of local and international Hajj institutions in shaping HTS cannot be overlooked.

The constraint of space in Mecca and Muna is a critical one. Hence, one of the criteria of the transportation systems is to use minimum right of way to save more space for housing and other services. It is striking that over 40 per cent of the available space in Muna is paved for roads and walkways, which is more than four times the acceptable percentage. Allocating more space for transportation elements does not necessarily improve their performance. It is equally important that any space assigned for transportation could be used for other functions. Some streets could be utilised for prayer or other public functions during certain hours of the day.

### *Alternative Solutions*

It has already been stated that the purpose of this paper is not to provide a detailed solution for the problems of Hajj transportation, but rather to provide an approach, or a methodology, by which appropriate solutions could be generated. Toward that end, we can summarise the alternative approaches or policies into the following areas:

Simple hardware	versus	Sophisticated hardware
Indirect control	versus	Direct control
Integrated solutions	versus	Discrete solutions
Comprehensive planning	versus	Local planning

The first question that comes to the mind of many people in discussing Hajj transportation is related to the kind of hardware systems which should be used on the local and regional level, i.e., trains, monorails, conveyors, etc. Every hardware system is most efficient for a specific length of trip and demand characteristics. Trains will be most desirable on the regional level among Mecca, Jeddah and Medina only if the capacity of their terminals is balanced and integrated with that of the local distribution system. Such a train line should be extended through the Mecca, Muna and Arafat corridor to minimise the need to transfer to local systems. Complex mechanical systems and guideway elements should not be used due to the difficulty of operating and maintaining them in the long run and ensuring top performance during peak demand. The system should be consistent with the objectives and functions of the Hajj, such as preserving the natural environment, being flexible and simple to operate and control. It should be familiar to most pilgrims and simple to learn to use. Such requirements strongly favour walking as a major mode of movement on the local level. Walking should be encouraged by using convenient and attractive facilities with frequent rest and service



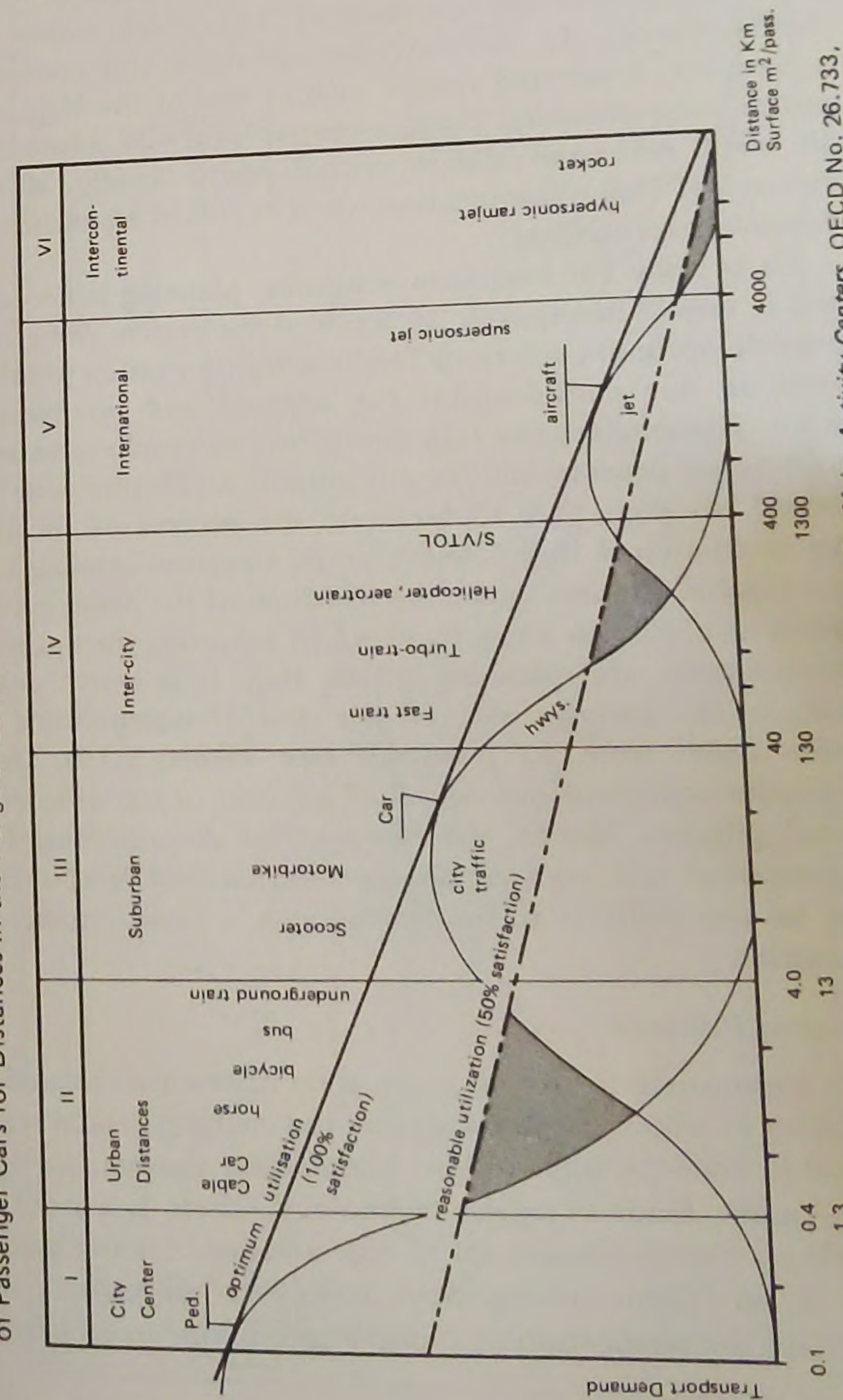
areas. The most desirable form of mass transit is the bus because of its diversity and simplicity. Exclusive bus lanes should be utilised to maximise the capacity of the road system. The feasibility of using electric buses, possibly with double decks, should be investigated. Mass transit systems are in a stage of development and improvement at present, and the future might bring new hardware systems which would be adopted for HTS.

The use of passenger cars and other vehicles must be severely restricted inside Mecca and Muna during the peak days of Hajj. Passenger cars are the least efficient and desirable as means of transportation on the local level, as can be seen in Figure 6.9. The curves representing pedestrians (walking mode) and cars should be moved more to the right of Figure 6.9 for the case of Hajj to reflect the increased concentration of people which increases the efficiency of walking and reduces the efficiency and desirability of motor vehicles.

Indirect methods should be used to control the operation of the transportation system as much as possible, unless the visibility of control is desirable. Transportation disincentives (i.e. some level of congestion) will control, indirectly, the number of pilgrims using the system in the future, while preventing these pilgrims from entrance will be a direct control. Governments may guarantee better transportation services by allowing the private sector to operate such services according to the regulations and standards set by the government, thus controlling such services indirectly. However, it is extremely important that such regulations be enforced and continuously updated, providing appropriate incentives for the private sector.

The strong interdependence among the elements of the transportation system and between transportation and other elements of the Hajj requires integrated solutions using the systems approach. Increasing the capacity of the road system at Arafat has solved the congestion problem there but has moved the bottleneck to Muzdalifah and

Figure 6.9: Transport Hierarchy Indicating the Desirability of Walking for Short Distance Trips and the Suitability of Passenger Cars for Distances in the Range of 20 Km





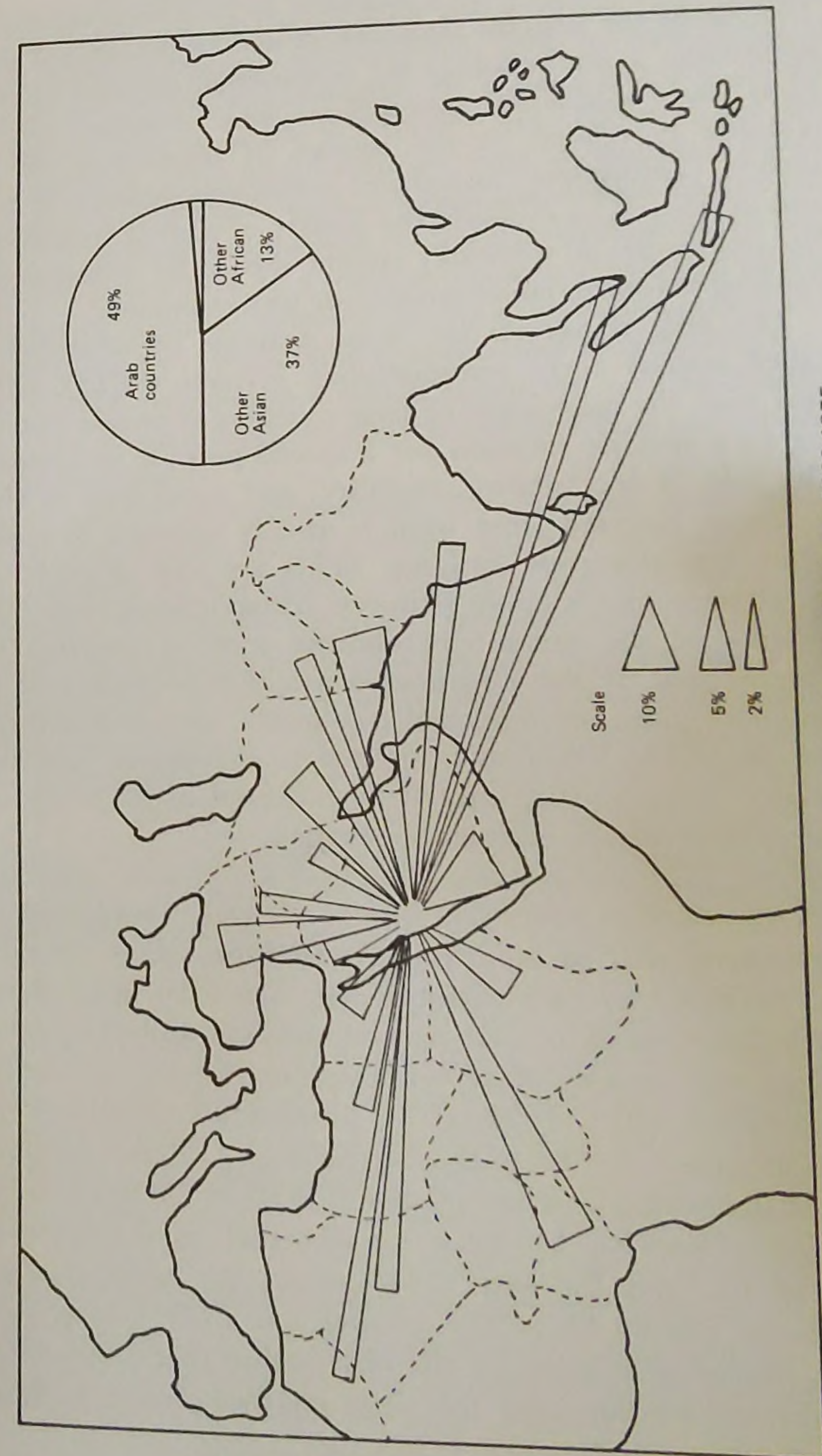
Muna. The lack of a communications network in Muna has increased the need for movement and caused congestion in the street network. The approach of an integrated or system solution will solve the real cause of the problem rather than the symptoms. To facilitate the operation and control of a complex, integrated system such as that of the Hajj, computers are a necessity. Using a central unit with terminals in all Saudi embassies and in critical points locally, all sub-systems of Hajj transportation could be linked by exchanging valuable informations.

To provide for long-term solutions, planning is necessary and it should incorporate all levels of the system. We cannot provide optimum solutions for local transportation problems without due consideration for regional and international input. Planning for the Hajj should be a comprehensive and a continuous process, and for this purpose all Muslim countries should do their part to facilitate the success of the Hajj. An international Hajj Committee of countries sending large numbers of pilgrims under the direction of the Saudi government, would be an important tool in achieving the optimum co-ordination and planning of the Hajj. It is worth noting that, on the average, over 85 per cent of international pilgrims come from 17 countries (see Figure 6.10). Other countries contribute individually 7 per cent or less of international pilgrims. Hence, the objective of co-ordinating Hajj organisation and services on the international level should not be too difficult to implement with a small number of countries.

#### *Areas of Research*

It is appropriate to suggest some areas of research related to the Hajj in which Muslim scientists and engineers could make valuable contributions to the Islamisation process, particularly in the fields of urban technology. There is a need to develop a comprehensive set of objectives and criteria applicable to an Islamic setting. Such objectives and criteria will facilitate the application of modern technology to an Islamic

Figure 6.10: Major Origin Points and Percentage of International Pilgrims Averaged Over 1969-75



Source: Ministry of Interior, Passport and Nationality Department, *Pilgrims Statistics, 1969-1975*.



society and will serve as a guideline to individual situations. The use of the systems approach should be encouraged since it provides a methodology for reexamining implicit assumptions and generating appropriate ones. Another area of research is related to the impact of technology on the society. Technology assessment techniques should be used and developed to evaluate the impact of a given technology. No (hardware or software) system should be introduced in the Hajj before its consequences are well evaluated.

The Hajj transportation is an example of what can be called special event transportation systems (SETS), which deal with the movement of large numbers of people converging to a specific location for a special purpose or occasion. The role of accessibility, mobility, and travel time in SETS is almost reversed from what is usually assumed in regular urban transportation systems. SETS are also characterised by stronger interaction between transportation and other systems of the urban environment such as housing. The effectiveness of the information available to users and the authority plays an important role in the operation and control of SETS. Research is needed to investigate how such unique characteristics should be reflected in the objectives and criteria used to evaluate the system.

Most SETS involve crowd movements at some level. The area of modelling pedestrian flow is relatively unexplored and particularly that of modelling crowd flow, where the mean area occupied by each person is less than 5/10 sq. m. Mathematical models of flow are needed for a safe and an optimum design and control of crowd facilities. Recent researchers (Henderson, 1971, 1972, 1974; Burns and Lykoudis, 1973) have suggested the use of the kinetic theory of gases to model dense pedestrian flow (mean area of 2/10 and 5/10 sq. m. per person). However, for dense crowds, such as those prevailing in the Jamarat and Tawaf areas, the hydro-dynamic approach should be used to model and analyse their flow. This postulate is based on the observation that a crowd is a continuum medium and that it is relatively incompressible.

Many of the basic characteristics of turbulent flow exist in crowd flow, such as randomness and irregularity in fluctuation. Such an analogy provides little help in formulating a model for crowd flow because no general solution to the turbulent flow problem is available yet. However, we can benefit from the analogy once we find an empirical model with the help of dimensional analysis and statistical methods. Another analogy which could facilitate modelling crowd flow is that of heat flow in a medium because it involves a large number of particles behaving in a partly regular and partly irregular manner, resembling the behaviour of individuals in a crowd. The variation of a crowd parameter, such as velocity, could be studied using the concepts of heat flow and random walk simulation.

The strong interdependence between the activities in SETS suggest the use of network analysis to facilitate the optimisation of the design, operation and control of such systems. Most SETS networks are characterised by time-constrained movements (networks with delays) and a high degree of vulnerability (many bottlenecks). Research will be needed to define the capacity and travel impedance associated with some links. The above discussion is intended to provide a guideline for some of the important areas of research related to the Hajj transportation and to stimulate the interest of specialists in other fields in co-operating in solving such a unique problem.

### *Conclusion*

The existing transportation system is characterised by a lack of control on the international level, lack of planning and outdated regulations on the regional level, and by congestion on the local level. These problems and symptoms are related and their solutions cannot be independent. Some objectives and criteria have been suggested to reflect the uniqueness of the problems of the Hajj transportation system compared to conventional transportation systems. Appropriate alternative solutions should involve simple hardware systems,



indirect control methods, integrated solutions and comprehensive planning.

The objectives and criteria suggested in this paper favour the use of unsophisticated mass transit and hardware systems which are simple to use and operate. They also favour indirect control methods which require minimum conflict and interference. The interdependence among the functions and elements of the Hajj, including transportation, requires integrated or system solutions. For example, local congestion is not necessarily reduced by building more roads but by providing needed information to the users and operators of the system, by providing alternatives to transportation such as a good communication system, by reducing the need for movement through optimum land use and distribution of services and by eliminating the inefficiency of closely related elements such as the housing and guides systems. To achieve integrated system solutions, comprehensive planning and control on the international level as well as on the regional and locals levels are needed. This will continue to be important in the future as more of the volume and characteristics of pilgrims are determined on the international level. Muslim countries should do their share and take an active role in organising the movements of the Hajj.

The Hajj is a complex system in which no single element, such as transportation, can be improved independently of other elements. Experts from all related technical and social fields should be involved in analysing any proposed improvement and solution. They should evaluate the impact of introducing any technology (hard or soft) before doing so. Such an effort should be a continuous one because Hajj is a dynamic system. Special committees should be involved in investigating, planning and co-ordinating Hajj projects and activities.

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## 7

## MECCA: THE SOCIO-ECONOMIC DYNAMICS OF THE SACRED CITY

Mohammed Jamil Brownson

*Introduction*

'Mecca calls to you till you have gone there — then you cry out for Mecca to return' (old Moroccan proverb).

No word of Arabic, no part of the Muslim world has such a diffusion as the Sacred City of Mecca. The very sound of the word 'Mecca' symbolises a pinnacle of attraction, even to those who do not know the meaning of Mecca.

For the Muslims, not only does the word connote a superlative place to which he or she is attracted, but far greater than that, it denotes the Sacred Valley in which rests the House of Allah on this Earth.

This is the cradle of the first revelation of Allah's eternal truth:

Read: In the name of thy Lord who created,  
created man of a blood-clot.

Read: and thy Lord is Most Generous,  
who taught by the Pen,  
taught Man that he knew not. (The Qur'an: 95:1-5)

And the last:

This day I have perfected your religion for you, and I have completed My blessings upon you, and I have approved Islam for your religion. (The Qur'an: 5:3)

Within thirty years after the last Revelation, the name of Muhammad — peace be upon Him — the Last Messenger of Allah, and the valley of Allah's house, Mecca, was known in



Africa, India, China and countless other places.

### *The Meccans*

As Islam spread from Arab to Ajami, to Persian, Roman, Turkish, Indian and Ethiopian empires, the spiritual centre of Islam was opened to the great world of Muslims rapidly increasing throughout the planet. The prayers of thousands – then millions – were directed towards Mecca – the pious of every direction and continent facing the holy Ka'ba – House of Allah. And the wise and the ignorant, the rich and poor, all were stirred by the fifth pillar of Islam – the pilgrimage – at least once in one's lifetime, if one can afford the necessary provisions, to His centre on earth – Mecca.

For the Arab, this was not only a command, but a tradition, and right up to the present, year after year, families would set out for Hajj as part of their annual migrations, if Bedouins, or every few years if not, the old being replaced by the young each generation.

For the merchants of Arabia this was the great hub of their slow cycles: east and west on monsoon winds or in long trains of camels north and south – the spiritual regeneration, a homecoming, after many years in foreign lands. For the soldier fighting on the frontiers of Islam (Dar-al-Islam), this was the physical symbol of the centre of the cause for which he fought. For the student this was the place to find the teacher and to learn about the great schools and scholars of the present and past. For the merchants this was the time and place to learn of the practical economics of Islam and the great trade network of the Muslim world.

So from all parts of the planet men alone, in groups and with families, set out for Mecca to cross whatever lay in their path or die on the way, a guarantee of paradise. For the pious this was an inner as well as outer journey, a process of purification. A great Muslim scholar has said: 'On my first visit to Mecca, I saw only the House. On my second pilgrimage, I saw the House of Allah; and the third time, I saw only Allah'.

As the message of Islam began to reach the four corners of the world, Mecca began to fill up not only with the returnees but also with pilgrims who came and stayed. As a place of refuge for the Muslim in which no blood could be spilled came the dispossessed as well as the scholars and pious men. While the political centre of Islam moved from Medina to Damascus, to Baghdad, then became diffused throughout the great Muslim world, stretching from Atlantic to Pacific and from the Arctic circle to the Equator, the spiritual centre was, is, and will always be – Mecca.

Even the great politicians came to Mecca – some in pomp and ceremonies, others humbly, in the way of the Prophet – peace be upon Him – and many who came in pomp left in humility. Some great men come for a period of study and contemplation in this Holy place, although the Caliph Omar forbade any pilgrim from staying too long as they might then lose their awe of the place when it became too familiar.

This, however, is the crux of the situation: the triple-interface of caretakers for the place, its visitors and the immigrants and the concern of all for livelihood in the barren valley. During the early years of the Muslim era, the empire under the rule of the Caliphs and Amirs was rich and great donations were set aside for Mecca and Medina, for public works, for stipends and social welfare to the families living there and for the guardians of the Haram. Although this inflow of wealth from the donations has continued up to the present time it has never been as steady and abundant as during the early years.

On a pragmatic level one might see a problem of luxury and leisure which evolved during that period and led to a certain lack of humility, coupled with a sense of familiarity and a lack of awe for the place. However, this view would be too simplistic. We have to understand several important factors which have historical basis to appreciate the socio-economic dynamics of Mecca today.



*Historical Factors in the Evolution of Socio-Economic Dynamics of Mecca*

There are five historical factors which have played a leading role in creating the socio-economic dynamics of Mecca today. One, the rise and fall of income from government welfare payments as well as public works capitalisation has caused a fluctuating economic structure. Two, the changes in trade patterns, which for many reasons bypassed the old Hajjaj Caravan route, have resulted in the decline of Mecca as a commercial centre. Three, the seasonality of the Hajj brought a sharp rise in demand for goods and services during the Hajj, while the demand remained rather slack throughout the rest of the year, so that many staples which had to be imported under normal conditions were in even greater demand during Hajj. Four, the aggregate increase in domestic population over time, including not only a natural growth but also a high immigration ratio, has led to ethnic diversity and an increasingly complex social structure. This social structure takes into account the Arabic tradition of status based on genealogy, compounded by slavery, adoption and marriage. Five, the political situation of administration, taxation, military garrisoning etc. brought about varying relations depending on the place and nature of the Caliphate seat and the amount of rivalry and stability in the whole Muslim world. The age-old relations between the settled communities and nomad tribes were felt even in the Holy City, since traffic by land was always subject to the mercy of the Bedouins, including the Hajj caravans. Even the oasis from which the agricultural products for Mecca were drawn was subjected to the fluctuations of local politics.

These factors have slowly unfolded in their complex interactions for centuries down to the Ottoman Turkish Rule from 1522 till the rise of Arab nationalism and ending of the Caliphate in 1911, the longest single stable government in Muslim history. Until this time the Wahabi movement was simply another of the periodic threats to urban

Arabian life from the Bedouins, and yet with a new added dimension of religious purism.

However, the most important event was not the defeat of the Ottomans by the Sherif of Mecca, but the conquest of the entire Arab peninsula by Abdul Aziz bin Abdul Rahman al-Saud. This literally meant that for the first time (since the seat of government in the first century hijri moved from Medina to Damascus under the Caliph Muawiyyah), *home rule had come to Arabia*. Not only that, but it had come through the Bedouins and with a form of discipline not seen in nearly 1200 years. As such, peace was guaranteed and the safety of travel and movement secured throughout Arabia for the first time in centuries.

A new era of pilgrimage then began along with a new dynasty and Arab kingdom; not only was the pilgrim guaranteed safety of travel but some of the excesses of ignorance and exploitation of the pilgrim were curbed temporarily. Even though the Hijjaj Railway was demolished, the era of machine travel was inaugurated with Abdul Aziz's use of a motor car not only in warfare but also during Hajj.

However, the early years were ones of poverty and generosity, and even the American oil prospectors shared the rough life of the Bedouin and at that time, since the oil supply exceeded demand, market conditions kept the price, and hence the profit for the Saudis, low. This meant two things: one, the Saudis had to tax the pilgrims to help cover costs of administering Hajj affairs, and two, the Hajjis and Meccans had to be economically self-reliant and depend on their annual crops of pilgrims for income.

Following the First World War and the end of the Ottoman Sultanate and Caliphate, the rise of nationalism which had swept Europe now spread throughout the colonies, empires and rest of the world. For the Muslims this nationalism manifested itself in both Pan-Islam, Pan-Arab and Pan-Turk etc. movements as well as anti-colonial and anti-kaffir (non-Muslim) political dimensions. For many the struggle against colonialism was a struggle for Islam and Muslim identity, a



form of *Jihad*.

The Hajj, an event bringing Muslims from all over the planet together in one time and place, was, as it had been historically, an excellent place to meet, discuss and spread ideas – the Islamic principle of *Shura* and *ijma* (council and consensus) in action. Thus, Mecca became a great political centre for the spread of ideas of 'Muslim nationalism' in the light of anti-colonial (anti-Christian) struggle. The pilgrims to Mecca began to increase. The number of pilgrims was greatly augmented by the fact that not only personal safety from pirates and Bedouin raids had greatly increased, but also a form of political safety from the colonial powers existed in Saudi Arabia. The Wahabis also improved the life of the pilgrims in many other ways. The old practice of leading the gullible and devout pilgrims to shrines of dubious authenticity and prescribing various ideas and processes, all for a price, was cut to the quick by the scrupulousness of the Wahabi religious officials under Saudi rule. The excesses of the Wahabis, which many pious Muslims have decried were, when all is balanced out, more than beneficial compared to the excesses prevailing before, especially in the exploitation of ignorance of religious knowledge by the local guides.

We can see that from an economic point of view, a process of supply and demand may bring about excesses in cost given a seasonal market – peak demand and limited resources with no steady economic activity throughout the year. This becomes a matter of relative values not necessarily covered exactly in Islamic law. The distortion of religious rites, innovation etc., all for financial benefits on the other hand, are thoroughly reprehensible and repudiated in Islamic law. What kind of ignorance contributed to this latter exploitation is best left to Allah's knowledge and judgement. Today, however, with so much emphasis on education within the Kingdom of Saudi Arabia and co-operation with other Muslim governments, Hajj Ministries and organisations, it is very unlikely that such flagrant abuses either on the part of the Meccans or of the Hajjis will ever evolve again.

### *Contemporary Factors Shaping the Socio-Economic Dynamics of Mecca*

Since the Second World War, two factors have played major parts not just in shaping the economic and social structures of Meccans but of the population of the entire Kingdom of Saudi Arabia.

First, oil prices have increased the revenues enormously, making Saudi Arabia, the heartlands of the Muslim world, one of the richest areas on the planet. This has given rise to a tremendous impact in public works revenues into the Hajjaj – Mecca and Medina and throughout the Kingdom. The money is invested in development and growth; and Jeddah has become the centre-point for a tremendous demand in consumption imports to the Kingdom. Saudi Arabia imports everything from foodstuffs to building material to industrial factories and all these imports come through the port of Jeddah. The population of Jeddah is now well over half a million, while the Meccan population is over 400,000 on a year-round basis. Such vast wealth, public expenditure, imports, demand for skilled labour, goods and services have brought about enormous rates of inflation. Those who suffer the most from this inflation are government employees on fixed salaries, farmers, traditional craftsmen, small shopkeepers and in general, those citizens who have not been able to take advantage of the new opportunities or government welfare projects such as interest-free loans for property and building. Secondly, the wealth of the Kingdom along with the allied wealth and development in other Muslim lands due to oil exports, along with the increase of ease and availability of transportation, has brought about a great increase in the numbers of pilgrims.

If we place the current level of pilgrims in the context of an inflated and rapidly expanding physical and economic structure in the Kingdom, some of the problems of Mecca come into much sharper focus. The current growth rates, with poor public transport, cheap trucks and automobiles



and even cheaper petrol, have produced a phenomenal rise in auto-ownership. This has meant that the developments in Mecca have tended towards the convenience of the car rather than the pedestrian, with the result that the congestion in Mecca, especially around the Haram, is formidable. The housing congestion has not just pushed the citizens further out, closer along the roads connecting the Taif-Mecca-Jeddah proto-cosmopolitan triangle, but it has also pushed up the heights of the buildings. The general pattern has been to increase height rather than expand outwards. This has partly been a function of terrain and a desire to be close to the Haram. The latter reason is both cultural as well as economic: buildings close to the Haram command higher rental during the Hajj season. However, high-rise buildings have only increased the population density in central Mecca, while modern building techniques and materials have played havoc with the ecology and the traditional character of the city, and by not meeting the demands of the local climate and habits.

On the whole, recent developments in Mecca have played a leading part in the breakdown of traditional environmental activities and economic patterns. The traditionals, craftsmen in particular, have been driven out of business. How could they compete with the mass-produced plastic goods which bring enormous, quick returns? The death of traditional socio-economic activities, along with the increased social, economic and physical mobility for the Saudi citizens has resulted in a social change which renders traditional architecture and ecologically balanced behaviour dysfunctional or distasteful to the growing number of mobile, affluent young Saudis. Thus Mecca now faces a severe change in the quality of life and in the quality of the environment.

#### *Mecca and the New Immigrants*

Since the First World War, the heterogeneous social structure of Mecca has had to absorb many waves of immigrants. The first wave of immigrants into Saudi Arabia came after

the Bolshevik Revolution: large numbers of Bukharis from Soviet Central Asia and other refugees fled from all parts of the USSR, fled Communist Russian rule and settled in Mecca and its environs. The Russian refugees were closely followed by refugees from Ata-Turk's introduction of secularism in Turkey. These refugees firmly established themselves in the *Hijaz*. This area was the only urban cosmopolitan place in Arabia which was at the same time heaven for the pious refugees as well as for the most business-orientated Muslims. For the Turks there was a further emotional link to the area: the *Hijaz* was ruled for over four centuries by the Ottomans (1522-1911) and during this period many scholars and government officials had retired to Mecca. As such, the acculturation to Arabic for the Turks and to some extent for the Bukharis, occurred simply and quickly. At present, their children, second, third and fourth generations, are highly Arabised.

The second wave of immigrants came during the upheavals of independence in the Indian subcontinent. Many Muslims, not wishing either Indian or Pakistani nationality, came and settled in Mecca. These were absorbed in the initially small but well acculturated 'Indian' community. The Indian community of Mecca is now quite large and has taken new additions and turns with the emergence of Bangladesh and the present crisis in Baluchistan.

Over the last few decades, the population pressures in their own country and the strong desire for religious education has brought into Mecca a sizeable influx of Indonesians. Many of them came initially to perform Hajj, but later decided to stay. They have acculturated very rapidly, assimilating easily and contributing well to the development of Mecca, for many of them are industrious and skilful. However, the Indonesian immigrants maintain strong ties with their relatives in Indonesia.

The most dominant immigrant element in *Hijaz*, yet the most blended, are the Hadaramis and the Yemenis. From many historical accounts we learn that they have played an



important role in the *Hijaz* from pre-Islamic times. Their influx in Mecca has increased tremendously over the past hundred years, in particular during the anti-colonial struggle, when the flow of Hadaramis and Yemenis into Mecca was very high. The Hadaramis, from Aden and South Yemen, are primarily merchants and are the most expansionist immigrants of all Arab peoples. It is probably their strong ties with South-East Asia which account for such an influx of Indonesians and Malays into the *Hijaz*.

The Yemenis are and have been labourers, craftsmen, agriculturists, merchants and Islamic scholars. Although from a very strong class and tribal structure, they have assimilated well and now form the largest non-Saudi resident group in the Kingdom. Many *Hijazi* citizens of Saudi Arabia are of Yemeni and Hadarami background: this is best illustrated by so many names of Yemeni and Hadarami origin among prominent families and government officials.

The latest wave of immigrants to Mecca is from Ethiopia, Somalia and Sudan. With the persecution of Muslims in Ethiopia and Eritrea, struggles for power in Somalia and Sudan, as well as the employment opportunities in Saudi Arabia, there has resulted in a big inflow of immigrants from East Africa. There is an even larger inflow of Muslims from West Africa. However, while the relatively Arabised East Africans integrate well with the host community, West Africans tend to stand aside from the Meccan population. There is a long history of immigration of Hajjis from West Africa to Mecca. The last two decades, however, have seen a phenomenal rise. In 1955, it was observed that at any given time some forty to eighty thousand African Hajjis were walking towards Mecca. The entire journey took about seven years; and after arrival in Mecca, many were unwilling to make the long, arduous trek back across the African continent.

The origin and dynamics of the *tukruni* (the local name for the West Africans) community are a matter for further study. However, the fact is that currently large slums and

shanty towns are mushrooming around Mecca to accommodate the influx of West Africans. Many of the *tukrunis* are without citizenship or residence permits and are forced to work as labourers. Their children are not able to attend school and, as such, their separation into second-class status is perpetuated. Practically, Muslims are not racially biased. However, lack of opportunities often reduces the talents of a social group and introduces a degeneration process into that group. The *tukrunis* are a potential source of local manpower: it is necessary to ensure that they are integrated into the Meccan community, educated and trained to make a healthy contribution to the country's development. As the *tukrunis* live in crowded, insanitary shanties and cannot take advantage of free medical care, they pose a serious health hazard, particularly during the Hajj season, when many African pilgrims stay in or near the shanty towns, simply because they are cheaper to rent.

Despite the complex social structure of Mecca, deviancy and crime are virtually non-existent. Even during the Hajj, the crime rate is extremely low compared to any other city of the same size in any other country.

#### *The Mutawwafs and the Economics of Guidance*

From the point of view of the pilgrims, the two main complaints concern the lack of sanitary conditions and the exorbitant prices for everything.

There are a number of social and economic factors which contribute to the condition of exploitation of the pilgrims by the local population. To begin with, the physical infrastructure to accommodate one million-plus pilgrims in such a small area, over such a concentrated period of time, is extremely difficult to organise, given overall priorities. Furthermore, the rapid increase in pilgrims has meant that many sincere *mutawwafs* (pilgrim guides) have not been able to adjust to the rate of increase; it is not possible for many of them to give personal attention to their responsibilities given the number of pilgrims that may be assigned to them.



The economic squeeze of inflation and upwardly mobile orientation of the local population, along with a long tradition of shrewd business dealings in which the sharpest wins the best price with no limits, all contribute to the present morass. All this, of course, does not excuse the exploitative behaviour of the local population — it simply places it in a proper context. Certain procedures help in the overall problem; for example, posted taxi fares at Jeddah airport and port and fixed parameters for hotel rates outside Mecca and Medina, etc. But enforcement of any regulations curbing exploitation is extremely difficult.

It would seem that the present situation largely affects the poor pilgrims. A sizeable percentage of the poor pilgrims come by any way possible with or without visa — without enough money for food and accommodation, working their way as manual labourers, selling small trinkets and begging while living out on the streets or in makeshift shanties at the edge of town. The rich, on the other hand, occupy the hotels and better apartments in Mecca and Medina — many contracted for beforehand by the agents. This statement should, however, be qualified in that the Hajj is not in most cases, strictly speaking, an individual affair, but a family one in which the individual income is not the sole determinant: for example, a son working in Europe may (from his savings) send his parents in Turkey to Hajj: a village might send their Imam, or a school might organise a group of students for Hajj: some governments, such as Iran and Nigeria, may subsidise travel costs.

Again, quality of accommodation is not dependent on cost alone, but also on location and type of landlord. As such, it is possible for Hajjis on low budgets to have adequate housing in Mecca, while those with more money to spend may live in poorer-quality, more costly accommodation. In such circumstances, the *mutawwaf* becomes somewhat of a speculator, in that even though his pilgrims are guaranteed by the government, his real earnings are not from the standard fee, but through commissions from providing services

such as transportation and accommodation. It is not unusual then, for a *mutawwaf* to go bankrupt during a Hajj. This results from putting a high investment into renting additional housing or transport for the pilgrims who are assigned to him, but who do not choose to use his accommodation, whether living free in the open or finding housing from other sources, arranging their own transport, etc. Thus he has to try to fill his rented space at whatever rate he can obtain, sometimes even lower than the rate he himself paid for the space. One prime example during the 1395 Hajj was a group of Turkish pilgrims, coming by land and, after paying the minimum *mutawwaf* Hajj fees, preferring to camp out and provide their own transport rather than use those of the *mutawwaf*.

Some pilgrim leaders may choose to arrange accommodation and transport for their pilgrims from sources other than the *mutawwaf*, or demand a kickback on every pilgrim they supply to a particular *mutawwaf*. In recent years this commission demanded by the pilgrim agent has increased exponentially; many even tend to displace the *mutawwaf*.

From the financial point of view, it would seem that the pilgrim agents make the most from the entire deal. Indeed, many have turned this into an occupation and spend the entire year recruiting and persuading potential pilgrims to 'sign on'. The next step is for them to make their own arrangements for accommodation and transport. As such, the pilgrim agents are emerging as a potential threat to the traditional role of the *mutawwaf*.

#### *Challenge of the Automobile*

Public transport in Saudi Arabia is in an embryonic stage. Taxis are common in most cities; in larger cities, private mini-buses run on semi-fixed routes under fixed fares. Intercity travel is also by taxis and mini-buses; recently a scheduled daily coach service has been started between Jeddah-Mecca and Jeddah-Medina at fixed rates. Major cities are also linked by air and frequent SAUDIA (Saudi Arabian Airlines) ser-



vices operate between Jeddah-Medina and Jeddah-Riyadh. Major transport of goods is by trucks. In general, this transport system suits the present needs of the country as a whole. However, feasibility studies on trains and expansion of bus services to serve a larger network of area are under way.

The pilgrim traffic lasts for a maximum of two months of the year, reaching its peak during a ten-day period in Mecca. The pilgrims arrive at Jeddah by air and sea and after completing the formalities, move to Mecca. Some pilgrims go first to Medina and then Mecca. However, most pilgrims go to Medina after performing Hajj. The movement of pilgrims gives rise to several major problems. From the transport point of view, we can identify the following problem areas: central Mecca, central Medina, pilgrim routes from Jeddah to Mecca and Medina, pilgrim route from Muna to Arafat and return via Muzdalifah, and during the 11-12-13 Dhar Al-Hijjah, between Muna and Mecca and return. The inter-city movement, Jeddah-Mecca-Medina, is relatively easy. The three cities are linked by motorways and movement between the cities is relatively congestion-free. This, however, is not the case with inner-city movements. The culprit, of course, is the notorious automobile: if everyone walked, with the exception of the old and the handicapped, the entire 'traffic problem' would evaporate. This, alas, has not been realised.

Our contention is that Mecca is a Holy City and that the present close-knit web of architectural structure is both suited to its religious function and topography. Hence building more road surface and tearing into the old section of town will despoil the sacred and physical ecology of Mecca. This, in fact, is what is happening. Presently many of the older sections are extremely dysfunctional for any auto traffic and are serviced by foot and donkey, while others are jammed with automobiles. This condition points the way towards conservation projects and somewhat towards the secondary road network design. The problem of conges-

tion at the centre near the Haram Mosque around the Ka'ba forms the physical and psychological central point for the city — it is seen as an area which should be relatively traffic-free by most factions. However, the mechanistic approach favoured by some traffic engineers calls for a ring road system which will allow point-to-point traffic from the outer areas to connect without going through the centre city. These types of linear-thinking solutions are precisely what Mecca does not need. There is a possibility of other transport and traffic network systems which can meet all the required needs, but this demands a careful study. Most of all, it demands an enlightened outlook and an appreciation of the values and culture of Islam.

On the regional level, the rapid transit system between Mecca-Jeddah and Medina, as well as increased road surface and coach service, will ease the burden. However, on the level of internal movement between the ritual areas of Muna, Muzdalifah, Arafat and Mecca a broad multi-dimensional programme is necessary. First of all, the ritual areas: rapid transit is exactly opposite to the real mass movement patterns and would create greater congestion at action points where rituals must be performed. What is needed is a system that allows an even flow of pilgrims (over time) through the various stages. With this in mind, major suggestions are now concerned with upgrading the pedestrian environment so as to make this mode of movement more attractive: developing slow transport systems such as the golf cart type of small trains powered by electric engines, capable of pulling a varied number of cars over any terrain. This goes in line with a trend of using such modes of transport at recreation areas, sight-seeing and other special events where masses of people must be moved through relatively small areas with frequent stops, for boarding and descending. These types of movement solutions, along with an increase in the quantity, extent and viability of the Mecca microbus system, will allow for a clearance of central area traffic and greater spatial dispersion of pilgrims, accommodation away



from the central area with good access to the Haram for prayer and visiting.

The main point to appreciate is that Mecca is a unique city from the standpoint of history and religious functions as well as in its topography. The traditional character of the city must be preserved at all costs and the landscape should not be altered or tampered with. One-dimensional solutions to the traffic problems have already done immeasurable damage. The problems of Mecca require more enlightened solutions which minimise road constructions, bridges, tunnels and other wonders of modern transport technology.

### *Conclusion*

In this paper I have tried to show the overall pattern that exists currently in the socio-economic fabric of Mecca and the Hajj. It is, due to the nature of the subject and scope of the paper, a less than systematic but sympathetic and subjective view. But then the methodologies of social science are nothing if not normative. Let me conclude this paper with statements of fact which should form the basis for further socio-economic research on Mecca and the Hajj.

First: the social structure of Mecca is highly complex; it does not submit to simple analysis. A contemporary understanding of the socio-economic structure of Mecca must of necessity take into account the rich historical background of the city and its inhabitants.

Second: from an ecological perspective the system of Mecca and pilgrimage has grown completely out of its natural dimension. The 'barren valley' of which Allah speaks to us in the Qur'an has been artificially transformed into an urban metropolis by a completely alien, imported technology. The city is rapidly being redesigned to serve the automobile rather than human beings.

Third: Mecca is a unique city. The problems of Mecca can have only unique solutions. These solutions can only be generated if these problems are viewed from the value system of Islam and studied in their proper cultural context.

The greatest and the most expensive challenge to man today is how to clean up his pollution and stop the automatic destruction of the planet which Allah gave him for support and to use for His service. The West trembles at its fate, which may well have been caused by the runaway, profit-motivated production-orientated technology. From the Muslim point of view, the question is rather obvious: are we worthy of the 'responsibility' (*amanah*) that we accepted to carry out? Allah has given us the power of self-destruction. The first step towards this self-destruction will be to turn Mecca, our holiest city and the symbol of the immutable character of Islam, into a carbon copy of the Western metropolises.

Allah has given us the will to choose. Do we have the wisdom and insight to provide all mankind with a vision of strength, beauty and integrity by transforming our centre, in the midst of all the pressures, into a state of praising Allah; and leading the Muslim world back to its true nature and destiny as a community whose every action is one of worship?

*Al humdu lilallah.*

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## 8

DEVELOPMENTS IN HISTORIC AND MODERN  
ISLAMIC CITIES

Ayyub Malik

In the architectural and planning journals in the United Kingdom considerable coverage has been given recently to urban developments and projects in the Middle East. Some doubts have been expressed by a number of architects and planners as to whether the essentially Western approach to the problems of city development is the most appropriate to the historical Arab city structure and the existing Islamic, cultural and social character of its people.

As an architect, naturally I have been interested in these developments, projects and the ensuing discussions. The invitation from the King Abdul Aziz University last year gave me an opportunity to perform the Hajj and visit the Holy Cities. The presentation there by the various consultants and contractors informed the delegates at the seminars of the developments — proposed and under construction — and hinted at the direction these might take in future.

Most of the delegates, including myself, felt a little saddened and dismayed at what we had seen. We felt convinced that the master plans for the Holy Cities of Mecca and Medina took no account whatsoever of the existing historic city structures or their cultural fabric and character. The size, scale, form and details of the new buildings constructed in the old city districts were devoid of any respect and understanding of the existing life-style, architecture and art, and at best only paid lip-service by superficial inclusion of the Islamic motifs and arches. Particular concern was expressed for the schemes for roads and tall buildings around the Haramain Shareef in Mecca and Masjid-i-Nabvi in Medina, both of which already seem to have suffered considerable damage due to loss of scale and historical and visual significance.



My own reactions to the developments were inevitably influenced by two recent events of considerable significance: The World of Islam Festival in London during the year had highlighted, with spectacular success, the great achievements of Islamic civilisation in the fields of science, arts, architecture, design and crafts. Publications, seminars and lectures during the festival filled many gaps of ignorance about Islamic culture and its achievements. The second significant event was the sponsorship by the Council of Europe of European Architectural Heritage Year in the preceding year. During this period, enormous effort in time, money and resources was expended at all levels of government, institutions and by the media and the public to restore and sensitively rehabilitate many historic buildings, districts and environments, and to create public awareness of the significance and importance of care and conservation of their national heritage.

At the end of the Heritage Year, in a joint declaration, 29 nations called for strengthened legislative and administrative measures and government financial assistance to protect historic cities, districts, towns and buildings. This declaration must essentially be seen as a restatement of the many similar aims and ideals of the long-established public and governmental bodies all over Europe. It may not be out of place here to mention that statutory laws for the recording and protection of historic buildings and monuments were passed in Sweden as early as 1630 and 1666; in England in 1882; in Germany in 1826 and 1890; and in France in 1830 and 1837.

The restatement of this long-established positive policy towards historic cities must be seen against the aims of developments in the European cities during this century, and the forces that affected and created the physical changes. I shall, therefore, briefly outline the principal reasons and the essential conclusions that now form the accepted positive policy towards historic cities and environments in particular, and all cities in general in Europe and North America.

During the last thirty-odd years, from the end of the

Second World War to the beginning of the oil crisis, the structures and life-styles in many great historic cities have been substantially destroyed in the name of progress and modernisation, slum clearance and urban renewal, traffic improvements and most of all in the drive to maximise financial gains from rising land values in the central areas. This has driven out the long-established residential population from the centres to the suburban sprawl at the edge of the cities, from which they now have to commute by public and private transport back to the city to work. This new pattern of work and movement has created further needs for large-scale developments to build more roads and clearways. Thus in a relatively short time, large historic areas of the cities, with their established communities, interdependent trades and businesses, their richness and diversity have disappeared forever. These centres, now exclusively taken over by offices, hotels and commercial buildings, do not generate any social or civic life. Outside working hours they are desolate concrete and asphalt jungles with no social or visual interest. During the day they generate traffic jams, noise and pollution. In the evenings they are open to crime and violence.

There is now a fundamental change in official policy against such developments and some of us will be aware of the recent debates in the British Parliament and speeches by, among others, the Secretary of State for the Environment, declaring government policy of incentives and encouragement to bring back to the city centres the diverse life-style of a permanent resident population and small businesses and trades. This change of policy is by no means exclusive to England and equally applies to other European and North American cities.

New developments, with a few exceptions, have been in the form of tall commercial and residential tower blocks which provide maximum accommodation, return on investment and free land for new urban roads. The tall office and hotel blocks have destroyed the city's historic skyline, scale and its visual cohesiveness. These are now discouraged by



the various planning authorities generally, and particularly where they are likely to have detrimental effects on the existing historic views. A Private Member's Bill in the British Parliament at the end of March will propose statutory planning constraints to protect skylines of historic importance and natural beauty.

As for tower blocks for residential accommodation, the current thinking is that the large-scale dispersion and relocation of long-established community structures destroys intricate social relationships and character. Families and children housed in tower blocks suffer from extreme human and social stress and deprivation. Near-the-ground living and streets in which people meet, walk and shop with ease are a social space, an extension of the living room, a space for chance meetings, social interaction and making friends. The conversion of the street into vertical lift shafts and minimum stairways has failed to produce any human participation and community feeling. The larger open spaces around the blocks act as uncomfortable wind tunnels discouraging outdoor neighbourly activities. An additional drawback has been that due to the essentially institutional nature of the common spaces and lack of responsible communal feeling, there has been a constant increase in wilful damage and delinquency.

The current policy, therefore, is not to build tower blocks for family living and occupation. To highlight the present concern, I quote Mr Anthony Judge, Chairman of the Greater London Council's Housing Management Committee as reported in *The Times* of 15 March 1977:

Tower blocks of Council flats should be progressively demolished because they create more social stress than the housing difficulties they solve. . . are antisocial, uncomfortable and costly to maintain. . . do not make acceptable homes for families. . . It will be cheaper to knock down the tower blocks now than to cope with the social problems they generate for another ten years.

The Greater London Council has commissioned no tower blocks since 1973.

The motor car, with all its benefits of mobility and individual freedom of travel was, in time, to pose the singularly most difficult problem to the city. Up to a certain point the city could cope, but the unchecked freedom of the motor car as means of mass mobility was achieved at considerable expense to the quality of human social life. The current attitudes are that no city of any consequence, old or new, can cope with or allow unlimited ingress of the private motor car without destroying its historical, social and civic fabric, and becoming unfit for human life and activities. Large areas of European and American cities are progressively being made traffic-free, accessible only to public transport and services. Much money and effort is being devoted to develop new forms of urban public transport systems that are efficient, quiet and less polluting. Meanwhile, the roads of the busy shopping streets have been adapted to a more human scale with new trees, planting, kiosks and benches to form a cityscape conducive to human foot traffic.

All through history cities have withstood many pressures and undergone changes. Small cities grew larger and became centres of culture or governments. Due to natural disasters or invasions they fell out of favour and disappeared. Most cities, however, managed to adjust to changes and absorb new populations and technologies without greatly altering their essential character. New people came in and settled in separate districts and in time evolved a life-style and skills that enhanced and enriched the city. But mostly the changes were small in scale and effect and the city generally continued to maintain its predominant life-style and character. The unprecedented scale and speed of changes and movements of populations brought about by the Industrial Revolution in the Western countries created new problems the city had not encountered before. I shall not go into the details and history of these problems except to say that



in the process the city acquired an administrative structure and many specialists to deal with its many problems. With time, the administration grew in size and became more centralised and sophisticated and the specialists more isolated in their individual disciplines and institutions. The complicated legislation and regulations enforced by the one and the professional mystification of simpler human needs and realities by the other deprived the residents of any understanding, participation and involvement in the shaping and working of their city. Frequently the administration has been accused of being cumbersome, expensive, inefficient and politically motivated, and the experts of being involved more in their abstract polemics, design theories and maximising profits for their clients than in the human and social needs of city residents.

It is impossible to explain in any detail the roles and responsibilities of the administrative, planning and professional bodies in making the cities as they are. It may, however, be useful to briefly look at them through the eyes of the city's aggrieved residents and social thinkers.

To the administrator, the city is a place full of problems to be solved for which progressively more money must be raised by taxes, rates and borrowing. This makes the city increasingly expensive to live in, forcing people to move out, reducing the city's income and making it more expensive for the remaining residents. More money somehow must be raised to subsidise the remaining population, to support the city's service industries and maintain its essential services. The continuing problems of the city of New York may provide an example to illustrate the problem. The consequent accusations that the city's administration looks at its residents as mere numbers to be retained, housed and commuted, little understands or pays attention to their social and community needs, may not altogether be without foundation.

The traffic and transport engineers, in their enthusiasm and promise of mass mobility, forget the simple needs of

people to move about in their city, and concentrate on the numbers of cars and trend statistics to plan the sizes and routes of urban roads. The fact that new roads rip apart long-established human communities and areas of outstanding historical views is of secondary importance.

The planner, in his tidy mind, looks at the city as well-defined isolated districts for living, business, administration and small and heavy industries, separated by major traffic routes without trees or planting. The diverse, organic and active human nature of the city does not quite lend itself to scientific analysis and statistics.

The architect, in his desire to participate in creating a technological life-style and environment, concentrates on expressing in his buildings the nature of materials and manufacture. The many diverse requirements and elements of his buildings are neatly packaged in a geometrical box of repetitive elements to produce startling photographic compositions. The fact that this approach degrades the city's historic visual quality and human scale is not much considered.

To the developer, the city is a place for the exercise of minimum investment for maximum profit. The constant innovatory capacity of technology to increasingly produce cheaper, untried and ill-fitting components help him and his consultants to achieve this aim. One must point out here that for the developer we must more often refer to the many corporate financial institutions, manufacturing and trade corporations and large government bodies. The corporate nature of their investment policies and decision-making, motivated only by maximum profits, efficiency, returns and wages, combined with the attitudes of administrative and professional bodies, produce vast new areas of city where roads, streets and buildings all look alike. This destroys the city's historic uniqueness, life-style, individuality and sense of place. We can travel through many cities of international status, where, except for superficial differences of dress and language, the physical and visual appearances



of many areas have no national, visual or cultural distinctiveness.

Being the first to witness and experience the consequences of such developments, people in the West have demanded for quite some time, and are being increasingly successful in effecting, fundamental changes in official policies towards their towns and cities. There is a progressive awareness and realisation that the present structure of city administrators and experts has grown to the point where there is no overall control or comprehension of the city as an intricate social balance or a human and cultural organism. This ignorance, together with the exclusion of the residents in decision-making processes, has resulted in the inhuman scale and nature of the changes in the cities, which are now constantly in the headlines for being in trouble and unworkable. People now realise that as long as they delegate their responsibility and involvement to others for others to decide what is best for them their cities will perhaps always be in trouble.

The positive result of this realisation is that efforts are being made to reduce remote bureaucratic decision-making and to provide increasing opportunities for public participation to affect the development and running of cities. In time, this will create more social involvement and civic responsibility, a style of life less exploitive and profitable, but more diverse, creative and conducive to human satisfaction and social ideals. In many European and American cities, as I mentioned earlier, a start in this direction has already been made. Large decaying old areas and districts of many cities are being sensitively restored, rehabilitated, modernised and grafted without relocating the existing population. The unfashionable areas of the cities are back in fashion and being occupied by many diverse professional groups and small-scale traders.

In relating the many facets and forces that have shaped the modern Western city and the current ideals and aspirations of its residents, I have for brevity's sake omitted considerable detail in order to cover the essential ground. For

the same reason, I have generalised in many instances, excluding many important aspects of the improved physical comforts and opportunities that the modern city has brought about. My intention has been to give you a reasonable background against which to make my essential point. That is, that the modern European city is an expression of theoretical, technical and planning regulations, economic and profit-based objectives, and a certain degree of competence and skill in employing the available technology to efficiently put together a number of building components and fixtures which create streets and left-over physical spaces. The result is that these spaces – inside and outside the buildings, in the streets, between the buildings and from ground to top of the buildings – are merely two-dimensional spaces. They lack the human and cultural dimension that the old cities used to have and, wherever they survive, still retain. The recent endemic dissatisfaction of Western urban man with the physical and visual form of his city is indicative of this fundamental deprivation.

Against this background of criticism and diagnosis, let us evaluate the developments in the Holy Cities in particular, the rest of the Middle East in general, and perhaps equally, other Islamic countries where this familiar outdated pattern of the Western city is being repeated. New commercial centres are ringed by the decaying historic districts of the city. These are increasingly being demolished to make way for new urban roads to provide access to the prosperous new suburbs. The old districts, becoming increasingly unlivable in, are vacated by the old residents and are in turn occupied by the new and poor arrivals from the country.

The city's transport problems are similarly being solved by the outmoded concepts of traffic engineering for mass mobility. New developments are in the form of the universal residential and commercial tower blocks, constructed of standardised repetitive building components, producing the same visual and physical destruction of the city as in its Western counterpart.



This model is not too dissimilar to that of the major American cities. We cannot ignore the warning of the American urban nightmare of violence and unrest that is all too familiar to us. An official American government report on inner Detroit in 1970 warned that 'between the unsafe, deteriorating central city on the one hand, and the network of safe, prosperous areas and unsettled corridors on the other, there will be, not unnaturally, intensifying hatred and deepening division.'

Knowing that no schemes of such wholesale destruction and devastation can now be proposed or considered for any Western city of whatever historical, cultural and spiritual merit, and that the master plans and developments in the Islamic cities are being proposed and carried out by the well known international organisations of repute, the obvious question must be asked as to why such a state of professional disregard and irresponsibility has come about? Is it that the international organisations working in countries other than their own do not apply the same degree of professional integrity and skill? Is it that in their greed to obtain maximum work, they have utterly abrogated their professional conscience and human responsibility? Or is it that they are not quite clear as to what is wanted of them, or perhaps that they are not the right people to have been asked in the first place? Are they being asked to do too much too quickly in an unfamiliar cultural, social and physical environment?

From the brief opportunity that I had to see things for myself and from what I have heard discussed and seen illustrated, I think that the reasons are a combination of most, if not all of these factors, and some of these could be systematically analysed as follows:

1. International organisations are necessarily large in size and multi-disciplinary in character. They must, therefore, rationalise, co-ordinate and integrate many different specialists and diverse organisations. Their essential role lies in their capacity to undertake large-scale infrastructure

projects such as airports, hospitals, ports and large industrial and manufacturing complexes. They should not be entrusted with work in the historical cities, which even in Western countries is carried out by firms of a smaller size with a less monolithic structure, but with special skills and experience in sensitively integrating their work within the existing city fabric.

2. Within the framework of Western cities, planners and architects work within legal constraints, planning legislation and controls, pressures from various local public bodies and the informed opinion of the media and press. They naturally take all these into account in making their proposals. None of these controls, which provide essential guidelines and directions, yet exist in a coherent form in the Middle East.

3. There are established criteria for detailed planning and architectural briefs and a well rehearsed procedure for developing the brief and initial schemes. The consultants are quite clear what is wanted of them and in turn are able to give reasonable assessments of the time required from briefing stages to start on site. This procedure is not yet fully established in the Middle East, and due to the urgency of development aims, enough time is not usually allowed to collate the available data and fully explore alternatives. One is aware of many instances of consultants returning from the Middle East, with two to three weeks in which to prepare design and costs for a large building project, or three to six months for full presentation of town planning study and proposals. Consequently, the proposals presented are the average or worse than the repetitive standard Western solutions. There have of course been some distinguished exceptions to this general approach, where good architects and planners, instead of undertaking too much, have devoted time and effort to perceiving and understanding the existing social and cultural backdrop, and have reacted by building sensitively and sympathetically. There are many others who, having visited and seen the differences between historical and modern constructions, have written extensively



to express their moral and professional concern and doubts as to the quality and appropriateness of what is being built. A special issue of the *Architectural Review* last year wholly devoted to the city of Isphahan is a case in point.

Let us recapitulate and summarise the essential main points discussed so far:

1. At many levels of government, administration, professional institutions and the public in Western countries there has been considerable protest, participation and questioning of the aims, directions and strategies in an attempt to re-assess the current policies of developments within the cities. This evaluation has pinpointed a number of factors which have contributed to the present decline in the cities' individuality, sense of place, diversity and quality of life. Gradually, fundamental changes in official policy are being effected towards private and public transport; size and height of new developments within the historic part of cities; pedestrianised shopping streets and systematic grading and listing of buildings, streets, districts and even trees of historical and visual significance. The National Trust, the Civic Trust, historic societies and many voluntary public bodies play an active part in these efforts.

2. The developments within the historic and cultural cities of the Middle East and other Islamic countries, influenced and proposed by the Western attitudes and consultants respectively, do not show much evidence of the latest positive thinking and generally include most of the outdated negative aspects of the Western towns and cities.

3. The architects and planners working within the existing framework of historical cities need special skills, understanding and sympathetic and sensitive attitudes. In the context of similar Western cities, this patience and painstaking approach is generally found in smaller-sized architectural practices rather than in the larger multi-national organisations who must essentially rationalise and standardise

to undertake large complex projects. Due to limitations of finance and resources, the smaller architectural practices cannot easily establish their offices in the Middle East. Such firms, carefully selected for experience and particular skills, and given special facilities for establishing offices, could with great advantage be entrusted with work within special areas of the cities.

In an extremely brief and essentially general sketch, I have so far attempted to show the fundamental differences of approach towards the cities, old and new, in the West and Middle East and Islamic countries. I have also put forward some reasons in the particular context of the Middle East. From the end of the Second World War to the beginning of the recent economic recession, Western cities have undergone tremendous changes of physical, visual and human consequences. The present unrest and dissatisfaction of Western urban man is symptomatic of his reaction to the disappearance of the city's human, social and cultural quality. The technological aims and ideals of the recent past have created perhaps some evidence of physical comforts achieved at the cost of dispersion, the breakdown of stable communities, the destruction of visual and historical quality and the isolation and alienation of the individual. Present concern and positive efforts at many levels of decision-making indicate a strong desire to infuse some social, human and cultural values into the existing fragmented professional approach to bring back the human involvement and quality of the old cities and in time to give each city a positive identity and sense of place.

This re-assessment and re-evaluation is not restricted to the many aspects of the city, but extends into many areas of human involvement in the present technological society and its values. Social thinkers, philosophers, writers and members of the younger generation are increasingly questioning the inhuman and exploitive norms of present-day Western technological society and are in search of alternative values



more sympathetic to human social and creative needs. In their opinion, these existing values have reduced man to a unit of absolute labour and efficient production. The aims and ideals of constantly producing increasingly efficient machines of exploitation and extractive technology have caused irreparable environmental damage, exhaustion of resources and pollution. The wasteful planned obsolescence of a consumer society has deprived man of his creative participation and has in turn created an increasing state of unhappiness and neurosis. There are great hopes that the present re-think may be the dawn of a Post-Industrial Age in which the relationships between man, machine and product will be based on more understanding and consideration for the environment and man's central position as a friend of earth rather than a ruthless exploiter.

The essential point that we must keep in mind is that through the Industrial Revolution and the evolution of the present technological values, Western man, due to his immediate involvement, has been able to participate, influence, assimilate and adapt to a new life-style and in the process to evolve social defences and institutional aids to counteract the resulting social, cultural and psychological stress. In our urgent aim and accelerated pace of development in many Islamic countries, we do not see much evidence of any assessment and selection of viable technologies or the process of assimilation. The results are all too evident in the disintegration of religious and cultural values, family and socio-economic structures. The local, regional and national arts and crafts, developed, refined and assimilated over generations and centuries, complete with their balanced, intricate and interdependent social organism, are rapidly becoming extinct. The crafts of pottery, weaving, carpet-making, metal work, brick and stone are disappearing, destroying skills and the integrated communities of craftsmen. The techniques and symbols of local arts, design and architecture are overpowered and degraded by Western aggressive advertising and manipulation. The out-of-work artists and craftsmen rush

to the slums of the cities, without pride or dignity, to become factory workers producing cheap and fake versions of their original artefacts in plastic and aluminium, and assemblers of Western-manufactured components to produce the goods they often cannot afford for themselves.

The genius of Islam which created the beautiful cities of Damascus, Baghdad, Fez, Isphahan, Feteah Pur Sikri and the serene monuments of Iran, Istanbul and the Taj Mahal has no confidence left in its values, history, culture and people and no respect for its cultural heritage and monuments. Together, we pay rhetorical lip-service to our achievements of the past while in our museums we store dust-collecting and ill-displayed objects from which we learn nothing. The best-displayed, cared-for and researched manuscripts and objects are to be found in the museums and collections of the West. The enlightening exhibition on the World of Islam in London last year could, with great benefit, be shown in all Islamic countries to increase the awareness of our heritage and urgent need for care. Its many illustrations of the old and beautiful cities of Fez and S'ana did communicate the uniqueness of the cultural achievements of its people. They did not owe much to Western technology, but belonged to the place, to the people who created them, and in their totality expressed their history, beliefs, skills and cultural way of life. Fez and S'ana are the cultural symbols and capital of its people. Presently they have a choice. If they choose the Western values of development and existing technology, without sensitive discrimination and cultural filtration, they will never have a choice. Their cities may acquire skyscrapers, motorways and supermarkets and with it the same, perhaps more, of the human consequences of its Western counterparts. In this transformation, all the long history, social structure and cultural symbols will be lost. It will be a symbol of nothing but a visual and human eyesore of the outmoded Western values of indiscriminate production and consumption, and machine's inhumanity to man. Alternatively, they can learn from the



West and evolve sympathetic changes which improve their lives and enhance the existing beauty of their cities.

In all Islamic countries, particularly Saudi Arabia — because of its singularly unique position and significance in the Islamic world — we still have this opportunity of choice. On the one hand we have the Western existing industrial values and aims, which in their short duration have destroyed many human institutions and shown little respect for man's culture and civilisation. On the other hand, with the present aims and opportunities in the Middle East, there are unprecedented scope and possibilities to re-establish the creative awareness and cultural confidence that has been absent from the World of Islam for some time and in this to show possibilities and new directions to other Islamic countries and perhaps the rest of the world. Still at our disposal is considerable evidence of our past achievements and heritage and substantial resources of men and skills not contaminated by the dehumanising industrial values or on the rebound from its first direct experience of them. In this choice, we will need constant vigilance and monitoring in the selection and modification of existing technologies to start with, to accept only those which allow a meaningful and creative relationship between men and machines and which do not destroy the existing socio-cultural structures. The new criteria will not be whether a particular industry or production system is technically feasible and economically viable, but that it does not degrade the human creative potential and social structures, but enhances the quality of life and human relationships in all its many-faceted aspects.

We will need to reconsider and adjust our present beliefs in the innate powers of industrial development to infuse the Islamic potential of social and cultural development into the existing technological processes. We will need to modify or do away with machines that make man a mere productive unit of exploitation by other men. We will need to invent new machines that will allow man to fulfil and experience his full human, social and cultural

aspirations and to infuse his spirituality in the objects that he produces. Work will not be separate from other individual activities, but will be an integral part of the total life and living culture. With these new positive attitudes and infusion of Islamic human, social and cultural values — not seeking constant novelty, innovation and amusement — we will have the new potential of development for a natural, humane, equitable and creative civilisation and organic symbols of form, architecture, art, design and crafts.

At this juncture, we might well ask what the aims and nature of industrial and technological developments have to do with city, architecture and buildings? But this indeed is the essential point. We are well aware of the aims of many Islamic countries, particularly of Saudi Arabia, to retain their essential Islamic nature and create a dynamic civilisation, based on Islamic teachings and values. The city, with all the physical and visual organisations of its parts, expresses on the one hand all the human activities that take place in it and all the forces that give it its physical content, and on the other, provides the natural backdrop against which all the natural human, social and religious activities are meaningfully performed. This essential and organic relationship between what a man creates and what he does with it or in it is what brings the city into being. Arab family life can only take place in the introverted privacy of a courtyard house. If the courtyard space was put around the house and rooms arranged either side of a corridor with windows looking out to the street, the life-style would inevitably change. Arab social life can only take place in Arab cafés and streets that allow one to walk, stop, say Salaam to a friend, shake hands and perhaps stay a while for coffee or tea. If the streets become major traffic routes with blocks of offices and flats, the social life-style in it will disappear. The arrangement of the mosque has been evolved to heighten the spiritual and social aspect of prayer and fundamental changes in its physical shape are bound to diminish this experience. Similarly, the valleys



of Muna and Arafat, appropriate and conducive to a spiritual experience in their original and natural simplicity, will not produce the inner human and religious depth if built over with modern infrastructure and dormitory blocks. And so it goes on. The factory worker, with the productive life-style of the Western man, will not have the possibilities of developing his potential of a 'Momin'. It seems to me, therefore, that if our aim is the creation of an Islamic society and way of life in an Islamic city, then Islamic values, together with the particular ethnic, regional and national social patterns and modes of behaviour, dress, food and family structures should dictate the framework within which new, and natural, social and urban patterns will evolve. In this way alone, we will create cities which though Islamic in essence, will be unique to the many Islamic people and their ways of life in different towns, cities and countries.

I hope that by now it is apparent that there are no ready-made or short-cut answers to solving our problem in creating a dynamic Islamic society and urban forms. It is naïve to think that a city is to do with the widths of roads, mobility and heights and sizes of buildings with absurd and misunderstood application of Islamic arches and design motifs to totally alien forms. The fact that an office or factory building has arches on its façades has no effect whatsoever on the inherent human and creative deprivation that the existing industrial approach to work brings about. We need different human values to enable man to create organic design forms. In the teachings of our religion, we have the values to create the society that is our aim. Some of these values will inevitably need research, examination and interpretation in the context of our life and problems today, to discover and establish their relevant active principles. All this will need wisdom, perseverance, patience, understanding and most of all time. But, meanwhile, we must develop and build new infrastructures, hospitals, transport and education facilities, housing and institutions of social welfare. How are we to do this in our problem of today? Before we search for possible answers,

we must fundamentally recognise that all through history, the city has, with all her visual and tangible qualities, represented man's cultural capital and savings and expressed the spiritual essence of his human and social institutions. Our aim is not only to continue the above tradition of the city, but also to make all things in it the best and most beautiful that we can.

As we have seen, the city is many things to many people, depending on their priorities, ideals and expectations and in its totality it is much more than the sum total of its human and physical parts. In evolving its physical shape and form, the city will absorb many diverse forces and ideals of politics, economic activity, social priorities, and human skill and creativeness. It will be affected by its history, climate, land and building materials available. In this it will need the understanding and professional skills from many diverse disciplines of scholarship and knowledge. It will need contributions from almost all levels of skills and human activity and the subject, therefore, is extensive. All we can do here is to explore some general avenues of possibilities and lines of argument in the hope of raising some questions and indicating general directions for further detailed studies. Some of the directions will naturally indicate a need for urgent action, while others will call for long-term policy decisions and guidelines.

In the light of generally prevalent and accepted aims and ideals for cities that we have discussed so far, let us deal with the possible immediate actions open to us for the Holy Cities of Mecca and Medina and their surrounding areas. The principles and aims of these actions will naturally have relevance to other Islamic cities of historical significance.

1. In Saudi Arabia, almost a million square miles of land is available for a total population less than that in Greater London. It seems that a natural and economically viable solution to the problems and pressures of growth on the two cities may be resolved by the creation of new and parallel



cities some miles away from the existing ones. The existing cities may be declared as National Trusts, freeing them from the artificial pressures of commercial developments due to increasing land values. The feasibility of developments in and around the Holy Cities can then be assessed solely in their spiritual and religious context in an aim to maintain, enhance and even improve where serious physical and visual damage already has occurred. What we will have then is a religious and spiritual Mecca and Medina with all their historic fabric and life-style on one side and a business Mecca and Medina on the other, which for some time to come will naturally be influenced by the present aims and pressures of modern development. The two centres may be connected by an efficient transport system, with great sensitivity and attention to detail as these enter the Holy Cities and their surrounding areas.

Many parallels for such an approach do exist in a number of European cities. I shall only mention the example of Amsterdam, where the historic city, with all its elegant houses, museums, palaces, historic buildings complete with tree-lined avenues of roads and canals have been substantially left intact and a modern Amsterdam with its new airport, industry and residential areas has been located some miles away from the historic town.

2. An immediate walking survey of both cities and their environments may be carried out to establish complete historic districts and localities still intact or not substantially damaged. These districts may be designated as areas protected from future unsympathetic developments. Architectural and planning firms with special skills and experience of working within historic cities can then be appointed to produce detailed surveys, recommendations and reports for sensitive rehabilitation, restoration, grafting and careful rebuilding within the existing physical and social framework.

The survey may ideally be carried out by a Commission composed of distinguished knowledgeable and experienced people in the field of historic cities, some of whom may be

drawn from international bodies such as Unesco, who have similar vast experience in many different cultures. The initial survey would not require any more time than it takes to walk through the cities and to identify areas of significance.

3. Works proposed within and in the immediate vicinity of Haramain and Masjid-i-Nabvi and other significant religious locations should be extensively and thoroughly evaluated in their details to fully assess the effect on the central visual uniqueness of the Holy Places and the physical integrity of their structures. The demolition and reconstruction around the Holy Places, extension of *tawaf* area, *Zam-Zam* basement and new taps and drainage, television control room, flood prevention culverts, new prayer shelter adjacent to the mosque in Medina and many other design elements such as water tanks on hilltops do no justice to the sanctity of the places and undermine their existing quality.

Similar attention may be paid to other elements, such as loudspeakers and noise from motor cars in the vicinity of the Holy Places. In many cities, horn-blowing near hospitals and schools is forbidden, and this may be adopted to exclude unnecessary noises that distract from the concentration of prayer and religious activity.

4. At the seminar last year, we had active and lively discussions in search of appropriate and spiritually apt solutions for developments in the Hajj environments of Muna, Arafat and Muzdalifah, as this indeed was the prime reason for the seminar.

Millions of Muslims all over the world who pray and save for most of their lives to visit the Holy Places do so primarily for a unique and singular religious and spiritual experience rather than the physical comforts. The bleak and powerful emptiness and simplicity of the natural valleys, hills, skylines and distances are essential elements in the religious and spiritual dimension of this experience. Great understanding, wisdom and forethought is needed in the decisions and policies for new and convenient infrastructures and buildings, if we are to retain the fundamental spiritual quality of these



environments.

A great many armies all over the world camp for days and weeks in temporary portable camp accommodation in the interest of national defence and security. It will not be too far-fetched to apply the same analogy to the few days of temporary settlements in the valleys which, perhaps less in physical comforts, are more conducive to the uniqueness of spiritual experience in fulfilling a lifetime's ambition.

The essential needs are convenient and reasonably efficient temporary forms of transport, easily understandable to the majority of pilgrims. There are many existing modern alternatives that can be explored and developed further to select systems within the most desirable spiritual parameters.

Basic shelter from heat and sun — the tent form and its total landscape during Hajj is quite unique to the visual experience and, to my mind, should be retained. Further work relating to fireproof materials for the tents, safe cooking appliances and built-in bedding arrangements could be pursued to evolve suitable alternatives within the existing design forms.

Essential services of water supply, drainage, lavatory and ablution facilities could be located below ground or sensitively constructed in local stone and character to merge in the overall landscape of valleys and hills.

In all our investigations, we ought to be consciously aware of the cultural and socio-economic backgrounds of the majority of pilgrims. In our search for new or alternative solutions, we should avoid over-sophisticated technical answers and concentrate on simple solutions understandable to most of the pilgrims. The eventual selection and adoption of alternatives will naturally be dictated by our spiritual, religious and social aspirations of the quality of Hajj and these parameters should guide us to choose the correct policies and guidelines for planners and architects to follow.

As for long-term aims, I may perhaps be permitted to restate what I have tried to establish a little while ago. The architectural forms, as seen in their totality in the human

urban settlements, are an expression of social and cultural ideals and their underlying concepts of human institutions. At present, and for some time to come, we perhaps will have to make do with borrowed existing forms of Western ideals. Meanwhile, our long-term aims essentially must be to clearly restate our values and ideals to enable us to eventually produce our own architectural and design forms, and in this our existing heritage will play a fundamentally important role.

We have talked about the need for our cultural defences and the creation of cultural confidence to rebut many of the superficial glamorous and aggressive values of alien cultures. This is not to protect people from making choices, but an attempt to increase their awareness and understanding of their own cultural values for them to make wise choices. The cultural filters can act as organs of evaluation and assessment in selecting, adopting and modifying available processes and technologies so that they are not only economically viable, but compatible with Islamic human and cultural values. This will obviously involve the educational interpretation of values and their assimilation in the educational systems. There will, of course, be many possibilities in achieving these intentions in practice. A start perhaps could be made by forming an unofficial, advisory and non-political, questioning, thinking and thought-provoking body of wise and experienced men and women drawn from many fields and walks of life. It might be a think tank or a foundation, sponsored by the recently formed King Faisal Philanthropic Foundation, composed of people who have demonstrated outstanding scholarship and professional competence. It may have permanent and visiting members and fellows who may participate in many university faculties to set new directions in the fields of education.

As its first priority, such a foundation may sponsor a Pan-Islamic Heritage Year to create awareness of the importance and care of buildings, districts and environments of historical and cultural significance all over the Islamic world,



arrange immediate repairs to works in imminent danger, give early warning to others, and by all manner and means of exhibitions, education and media, create much-needed cultural self-respect. The recent experiences of the European Architectural Heritage Year, the European Heritage Commission and the Unesco's 'Recommendations concerning the Preservation of Cultural Property' will be most useful sources to draw upon. During this year, the foundation may initiate new and adapt existing departments and policies of systematic research and study, recording, comparing and exchanging notes to build up comprehensive Islamic archives. Furthermore, it may participate with various university educational bodies and schools of art and architecture to establish courses to emphasise the importance and comparative understanding of Islamic history, culture, arts, crafts and social aspects and institute research into various historic and cultural habitats.

Most of the Islamic countries have been losing considerable talent and brain power to the West for a great many years and in many instances have been unable to provide opportunities of involvement and purpose to those wanting to return. The foundation, composed of men from many diverse backgrounds and disciplines of arts and physical and social sciences may in time act as a catalyst in stopping the brain drain and tempting some back by creating a sense of purpose and positive commitment.

In concluding, I may perhaps be permitted to belabour and re-state a couple of points. I may appear not to have spent enough time and effort in making more constructive suggestions in respect of the possibilities of developments in the Hajj environments. In the present open-ended framework of available possibilities, the choices and options are considerable. Our first priority, it seems to me, should be to reduce the options by clearly defining the spiritual and religious criteria. I feel convinced that appropriate answers could be found within the existing simple and historical context

rather than building new complex and alien physical infrastructures of dormitories and roads with over- and under-passes.

My main concern has been to stress the need and importance of retaining and caring for that which the future generation will not be able to mend, repair or restore. There are ways of building and expanding cities and transport systems without demolishing our cultural and historical inheritance. In our desire to drive and go somewhere, let us not destroy that which is worth driving for and going to. There are scores of examples of Western cities where both the worst and the best has been achieved. Let us learn from their best achievements as well as worst ones, so as not to repeat their errors. Our religious, national and cultural heritage with all its institutions is in our trust from our forefathers and in this, it is our cultural capital and cultural savings. It is not for us to squander, mutilate or destroy and impoverish the coming generations. On our shoulders rests the heavy burden of care if, in history, we do not wish to be accused of having participated in the gravest cultural destruction that any generation of men have, by consent, inflicted upon themselves. May Allah give us the strength and foresight to discharge this duty in prudence and wisdom – Amen.

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